

FIG. 1

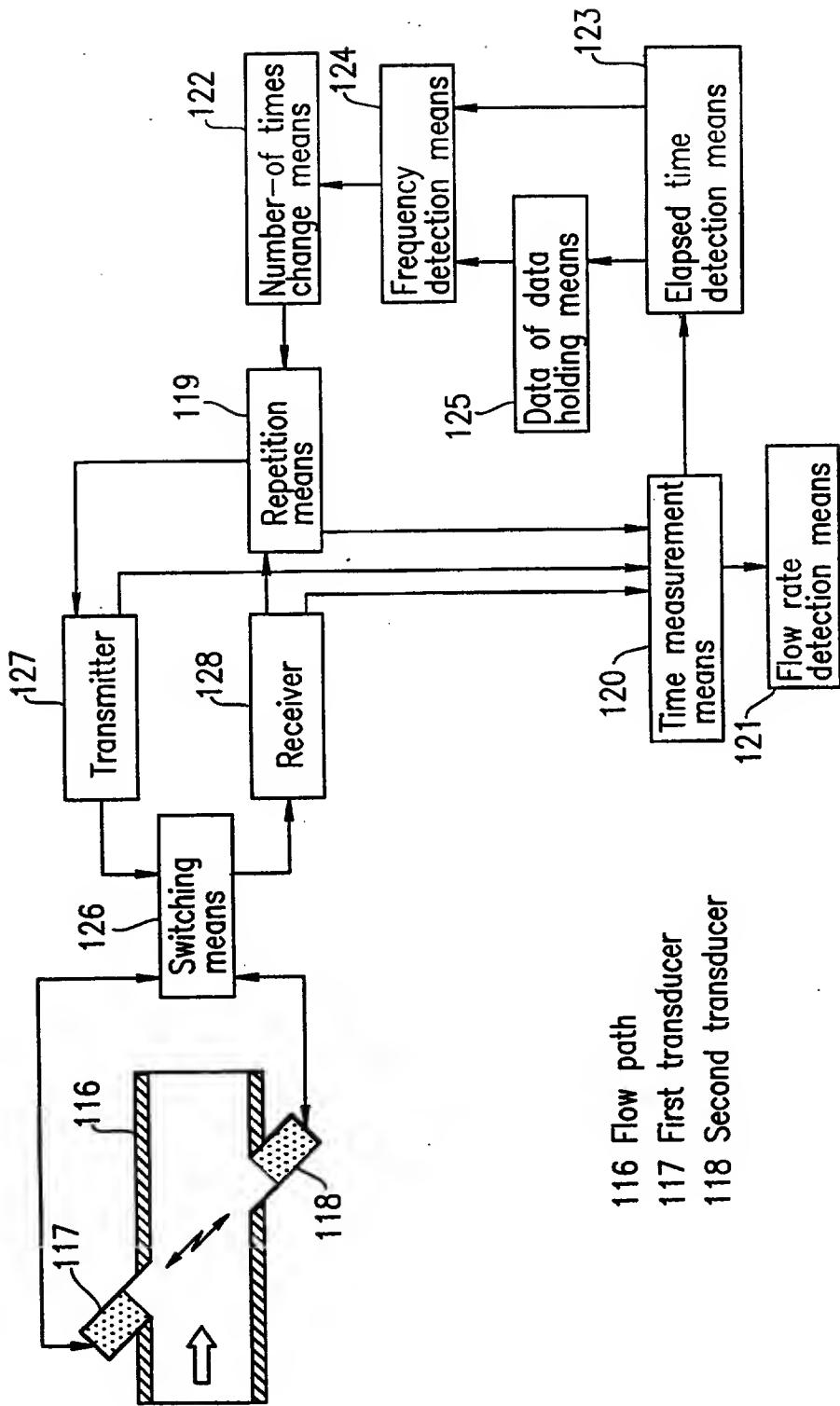


FIG. 2

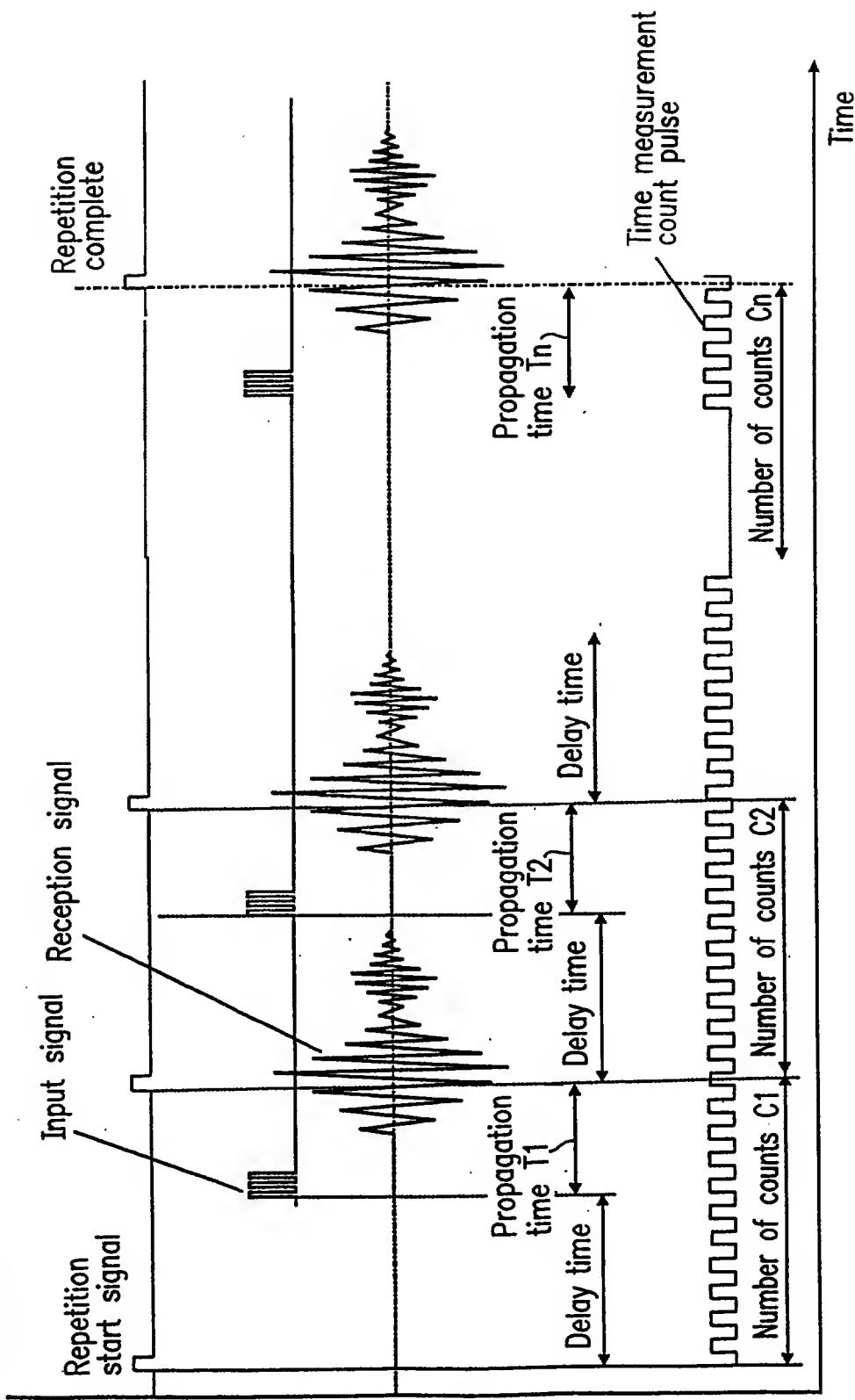


FIG. 3
Repetitive measurement
of ultrasonic wave

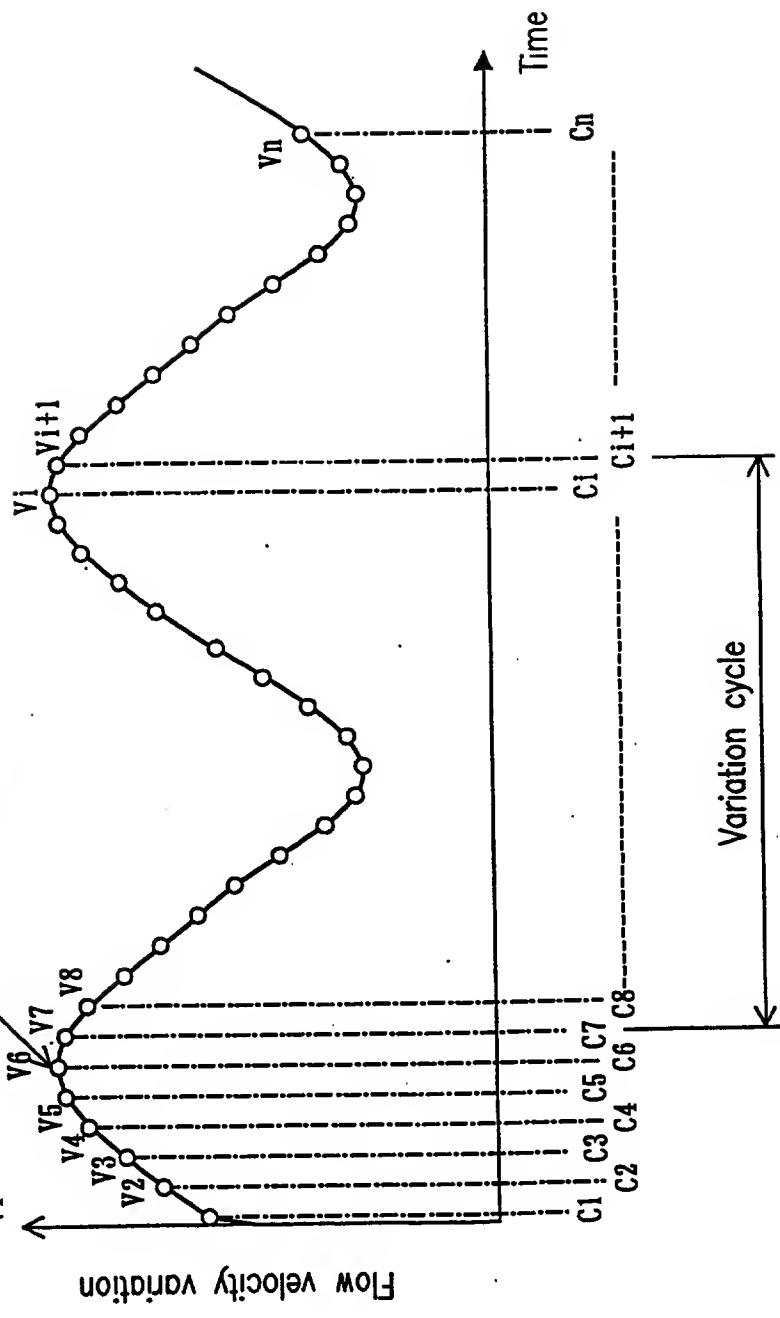


FIG. 4

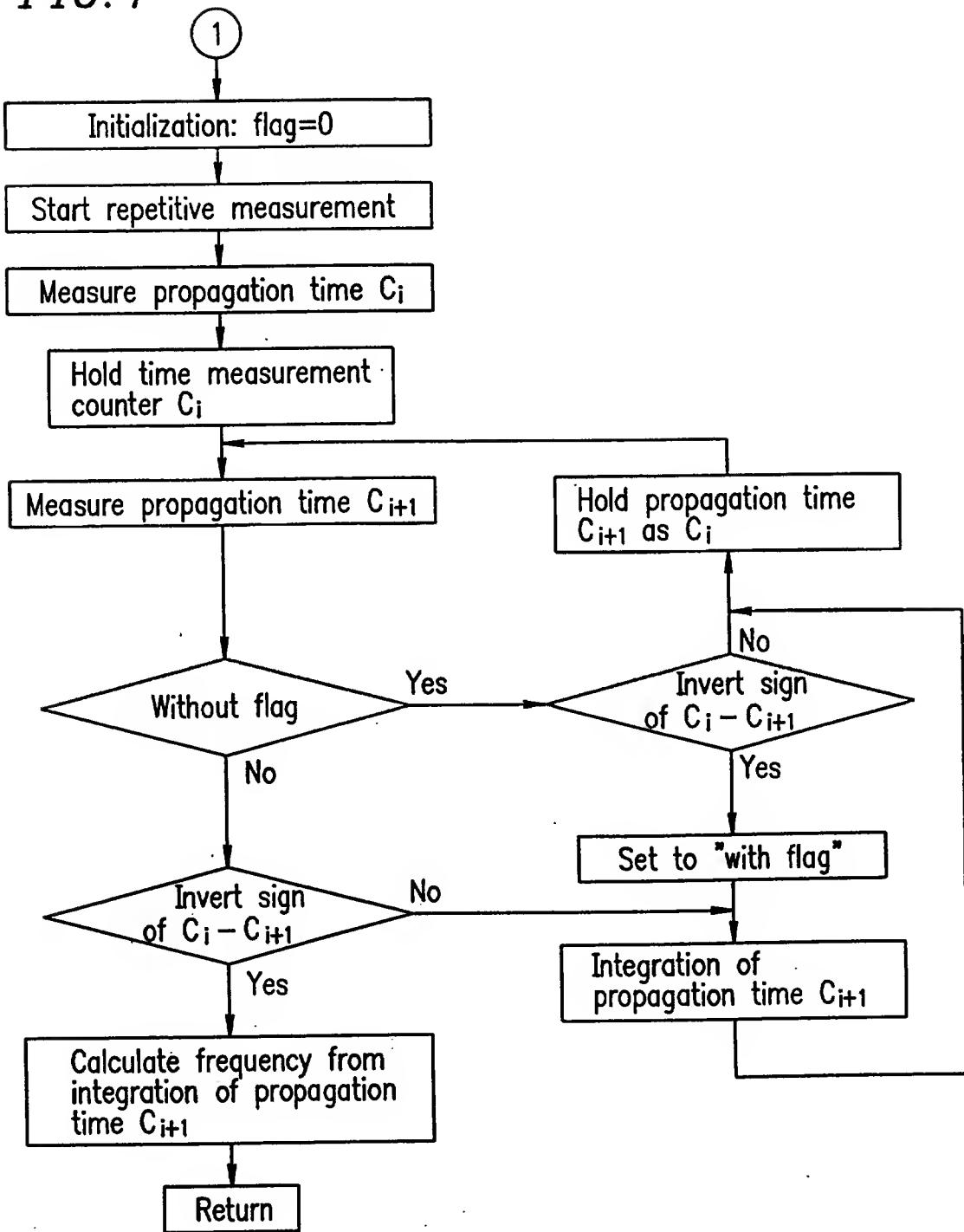


FIG.5

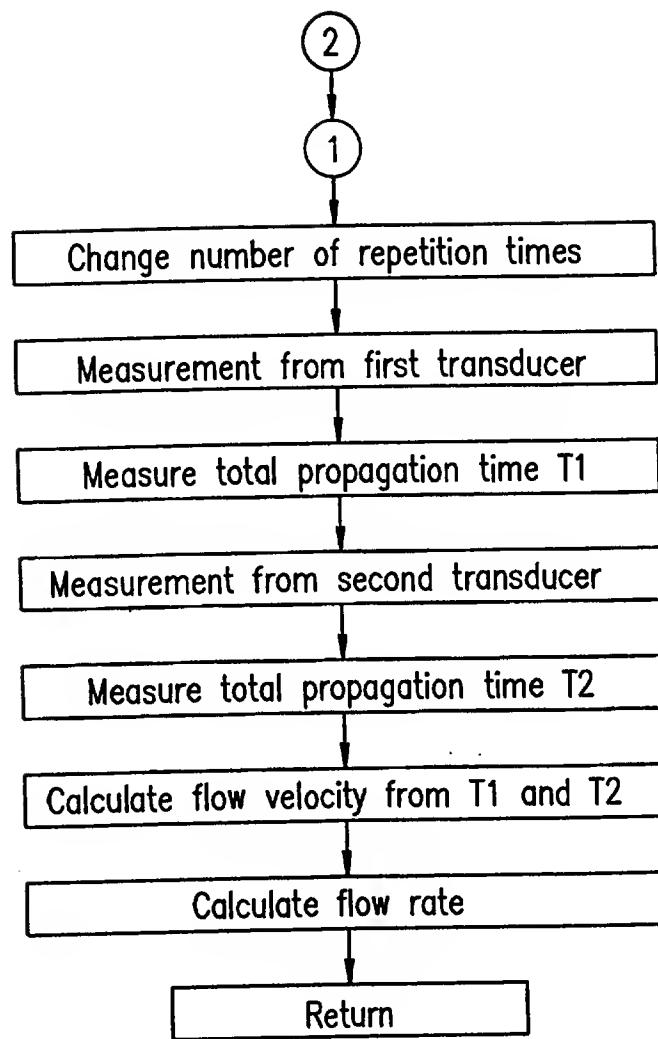


FIG. 6

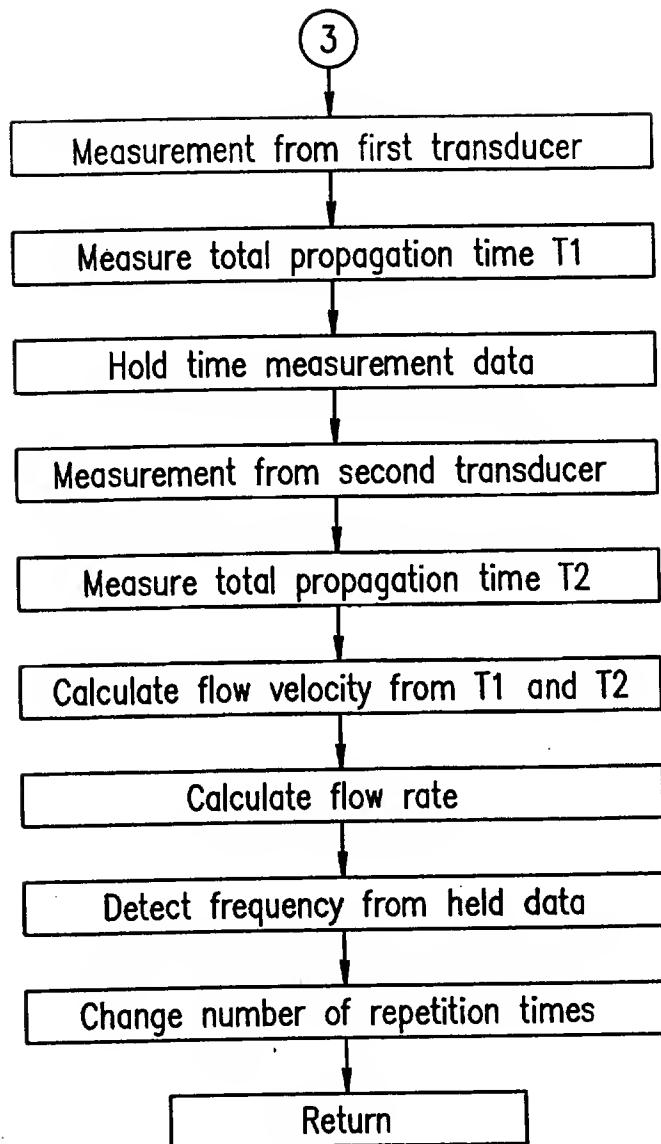


FIG. 7

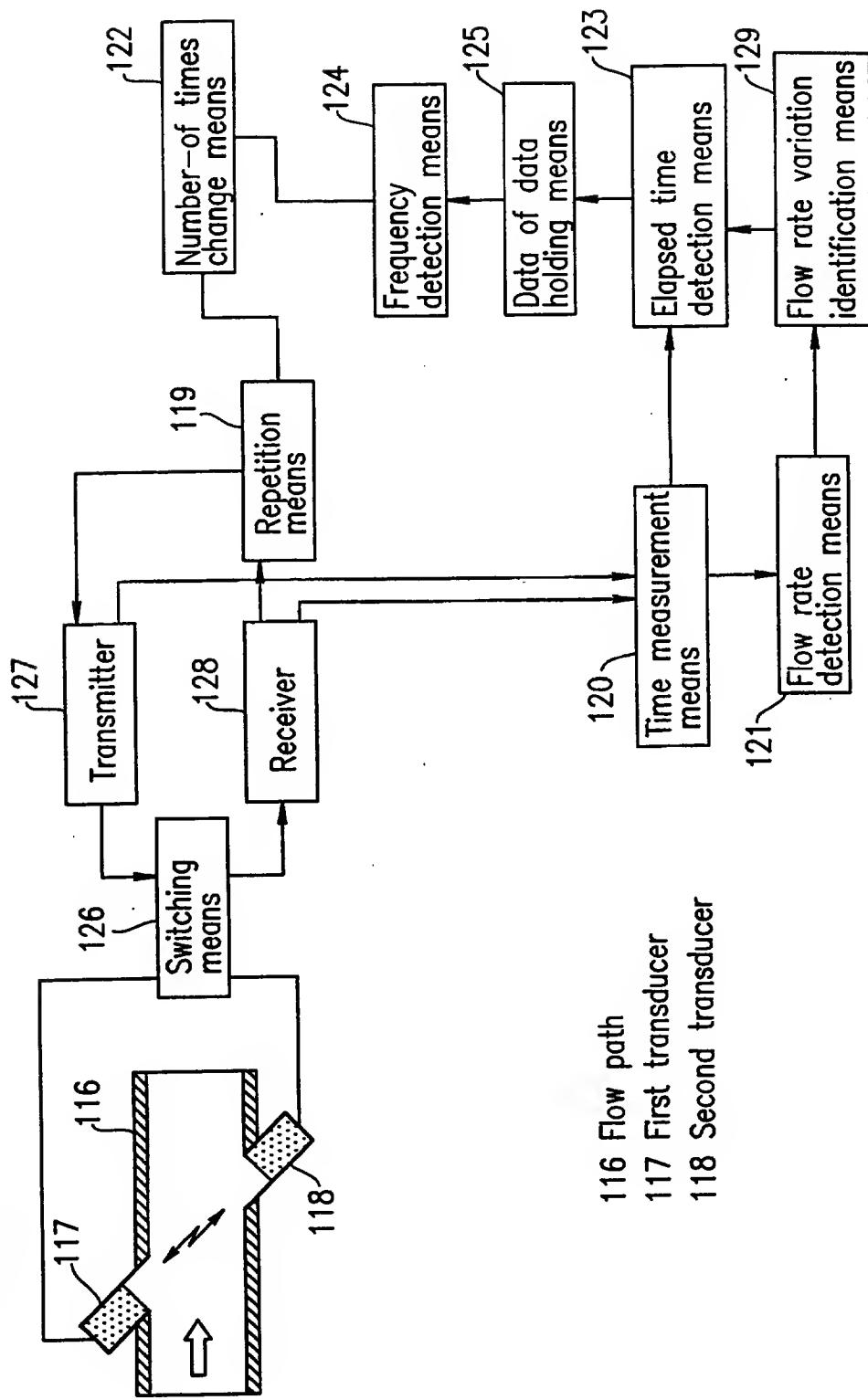


FIG.8

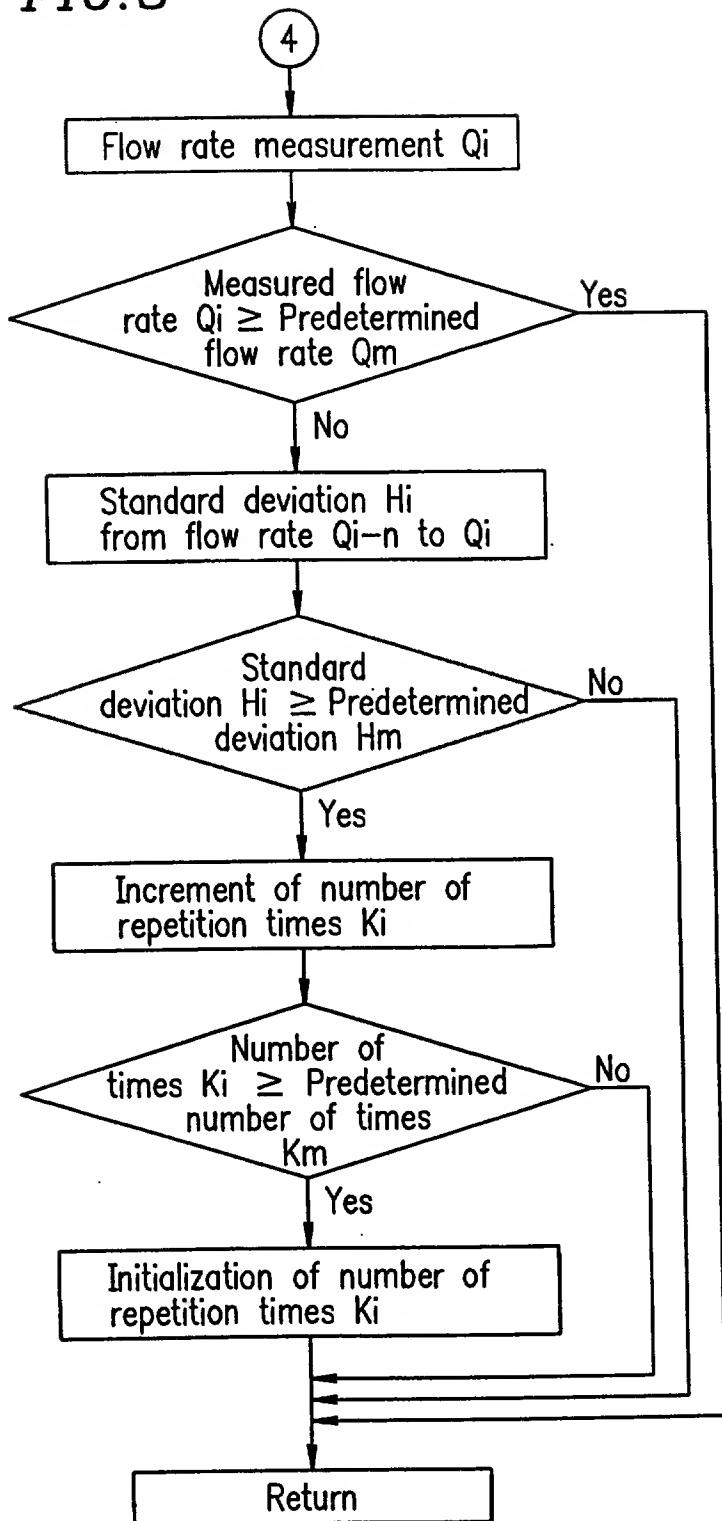
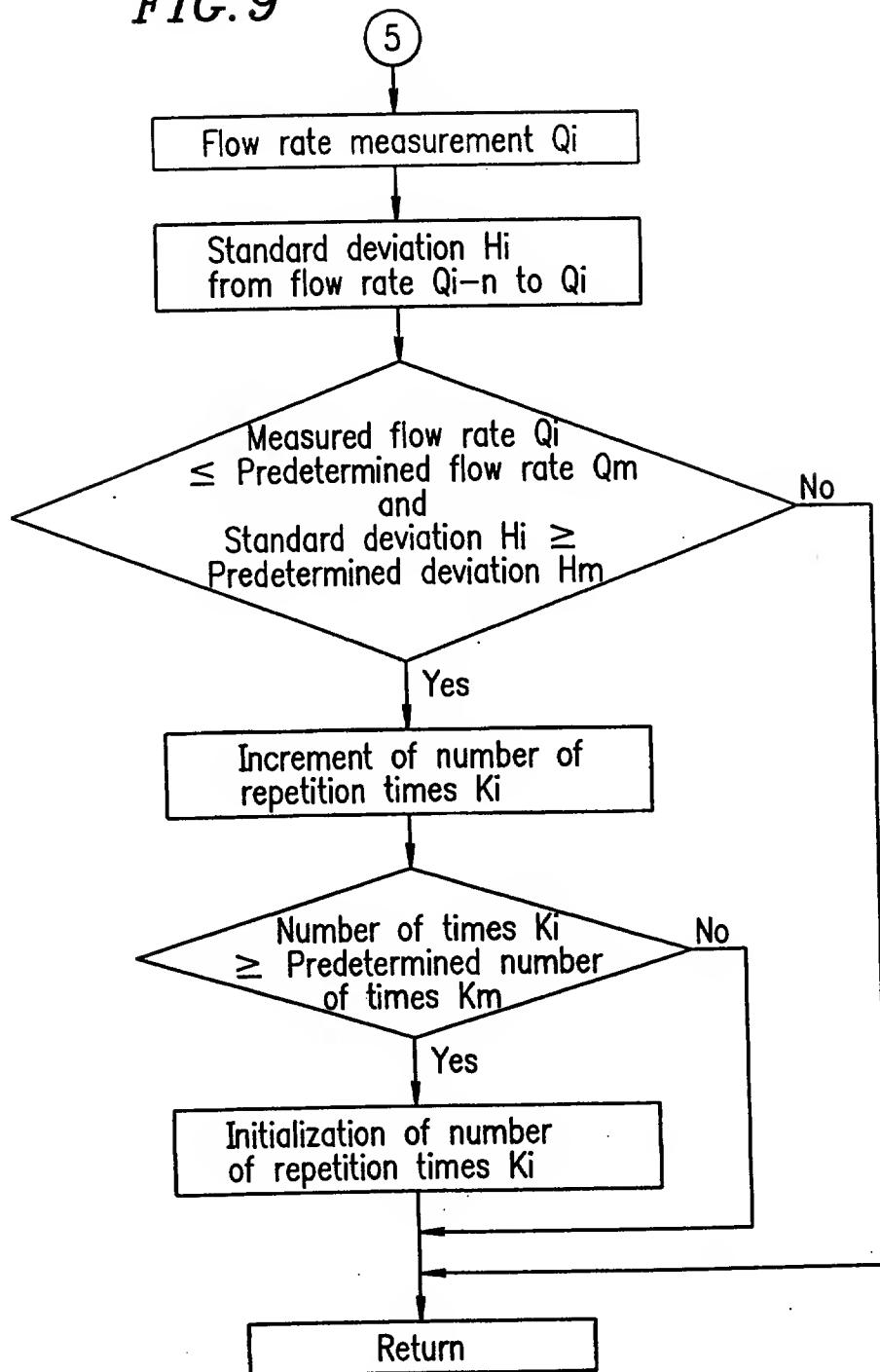


FIG. 9



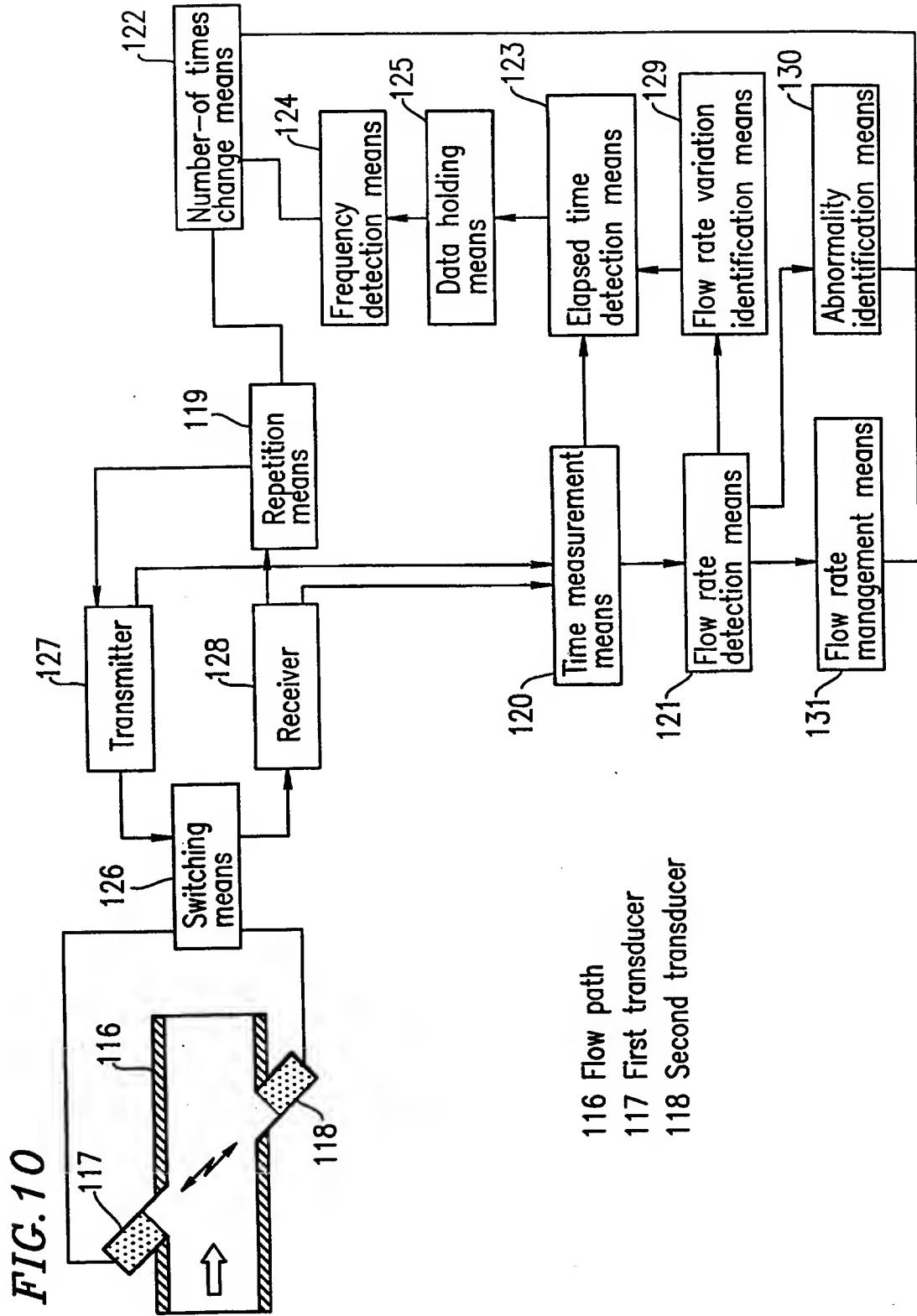
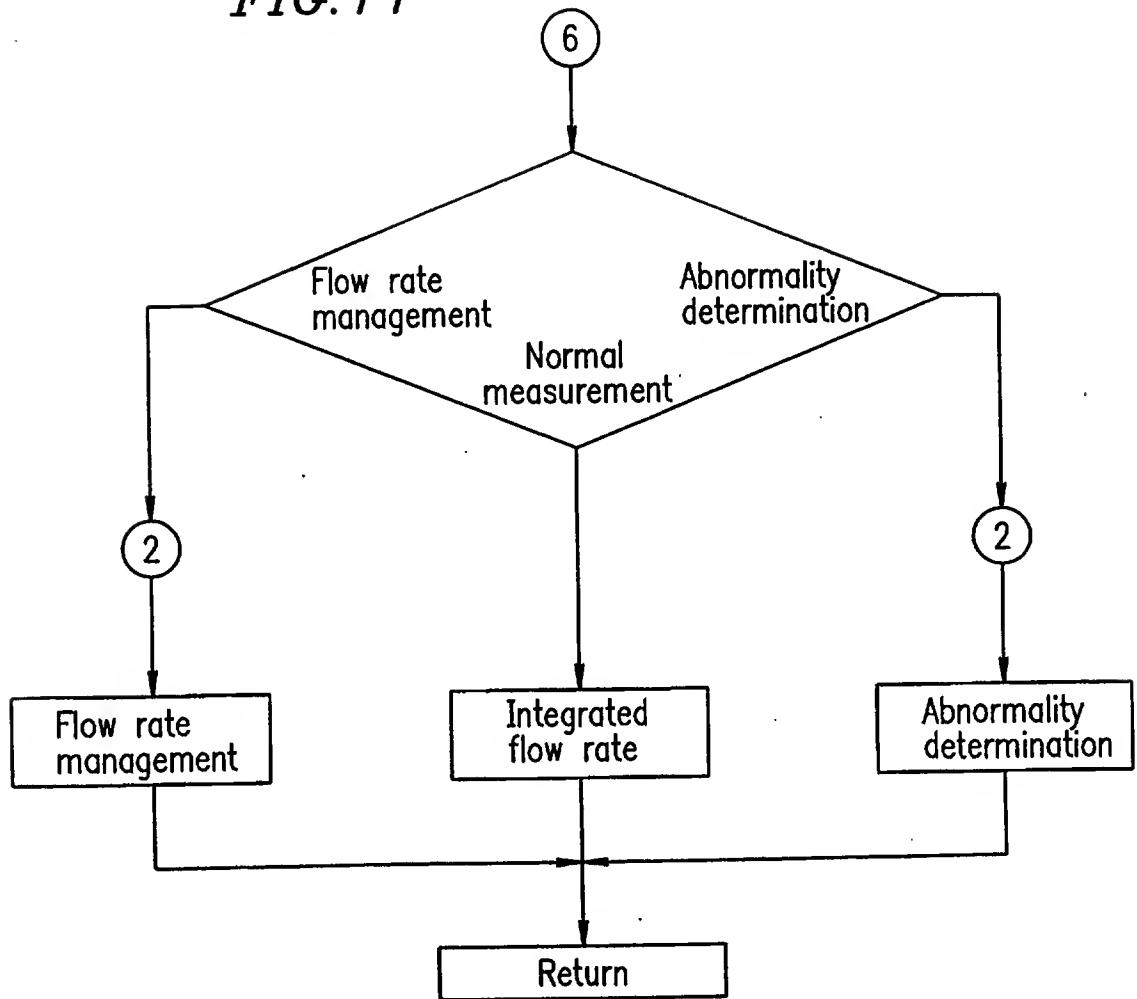
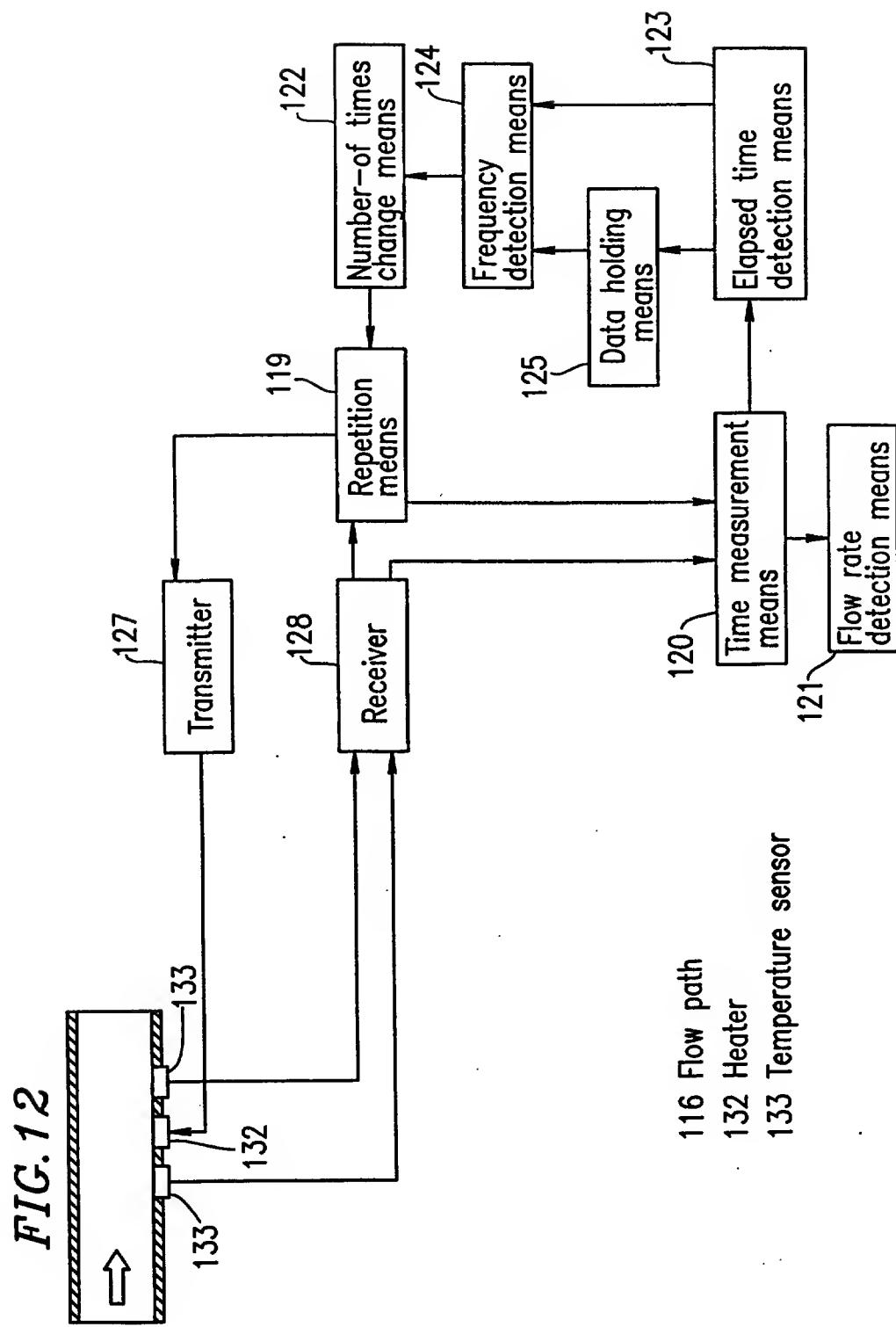


FIG. 11





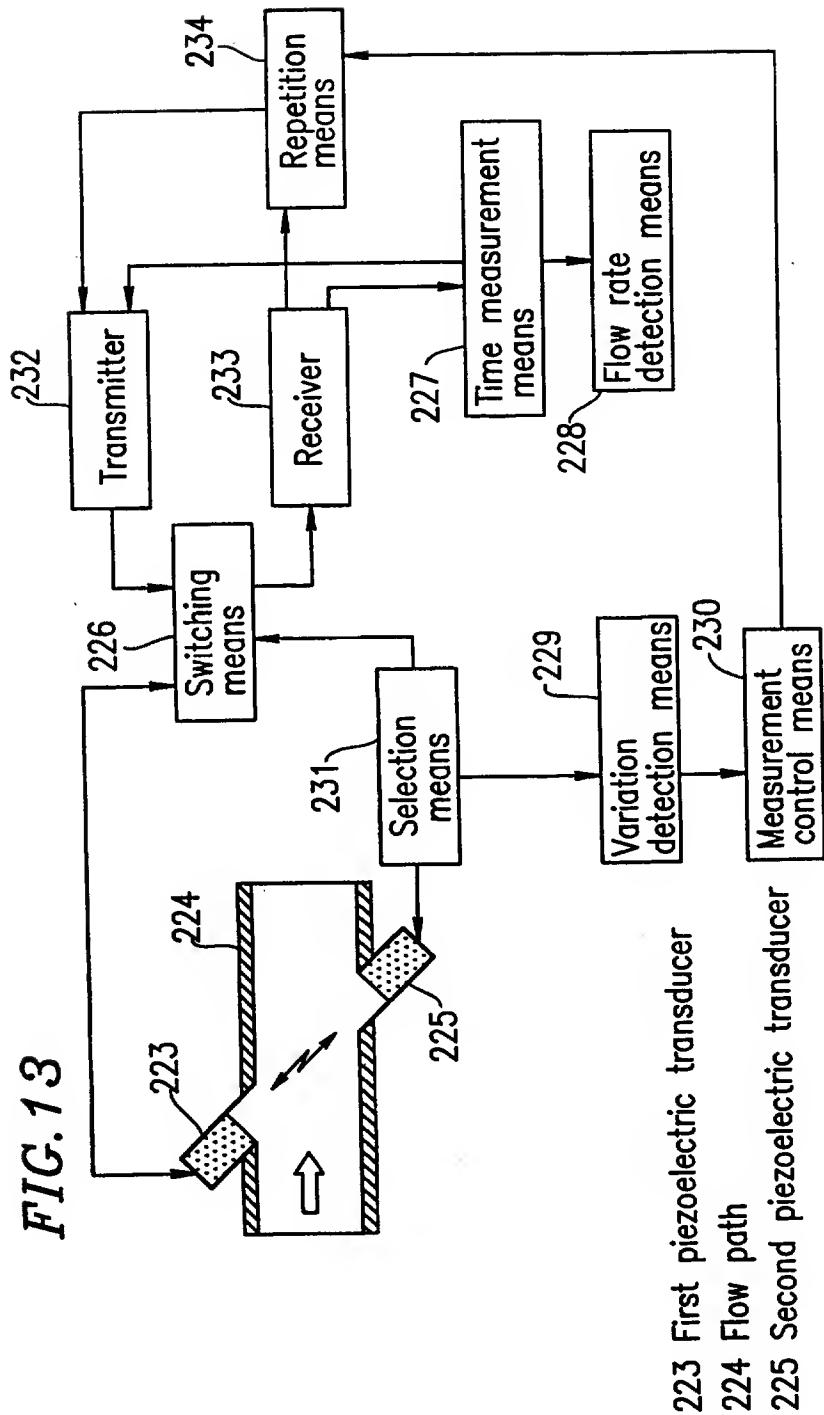


FIG. 14

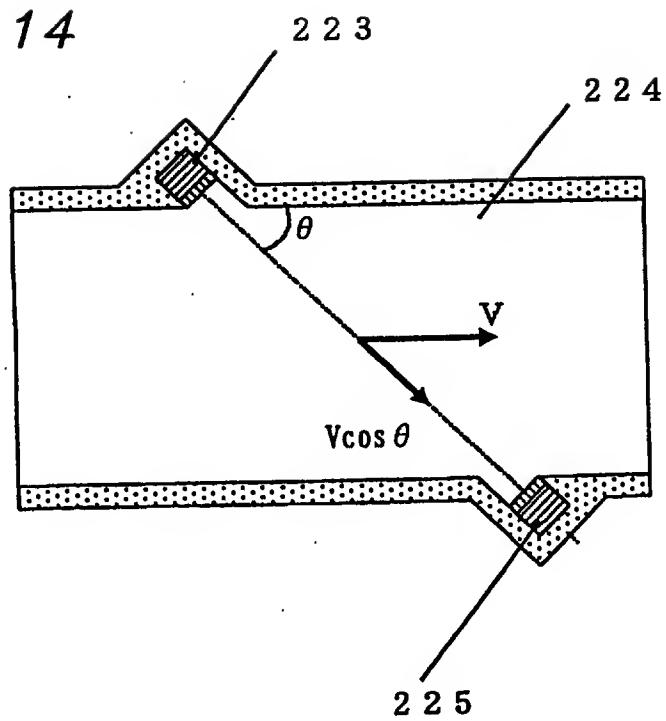
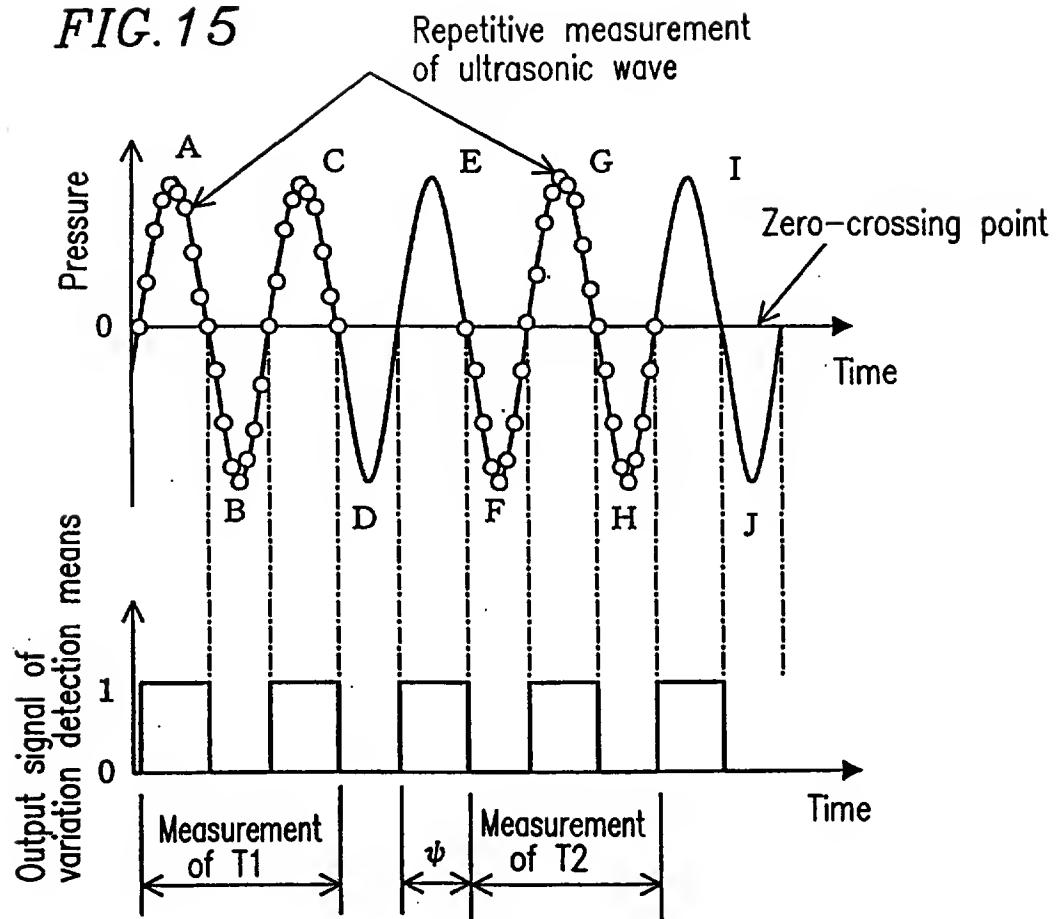
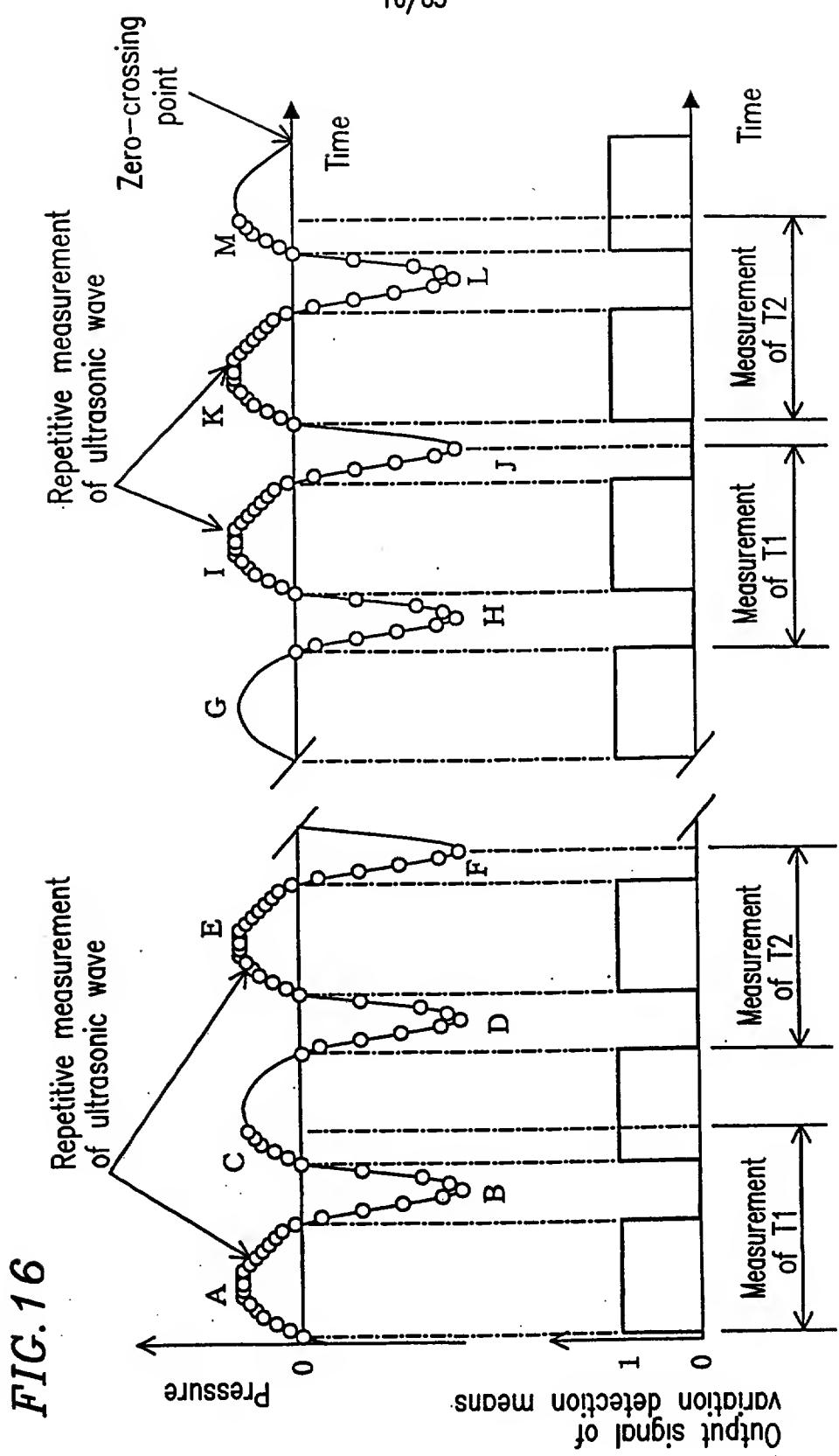
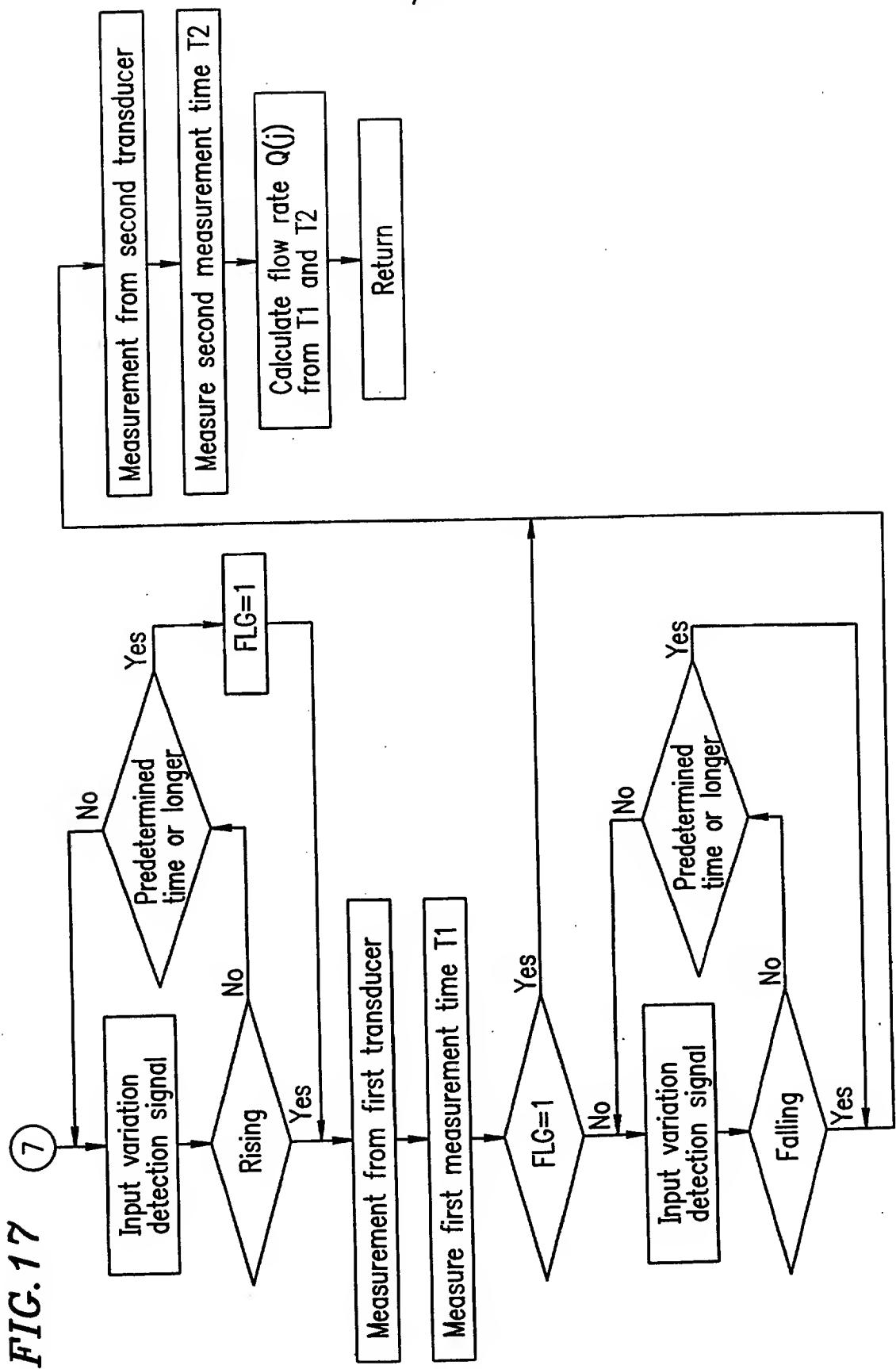
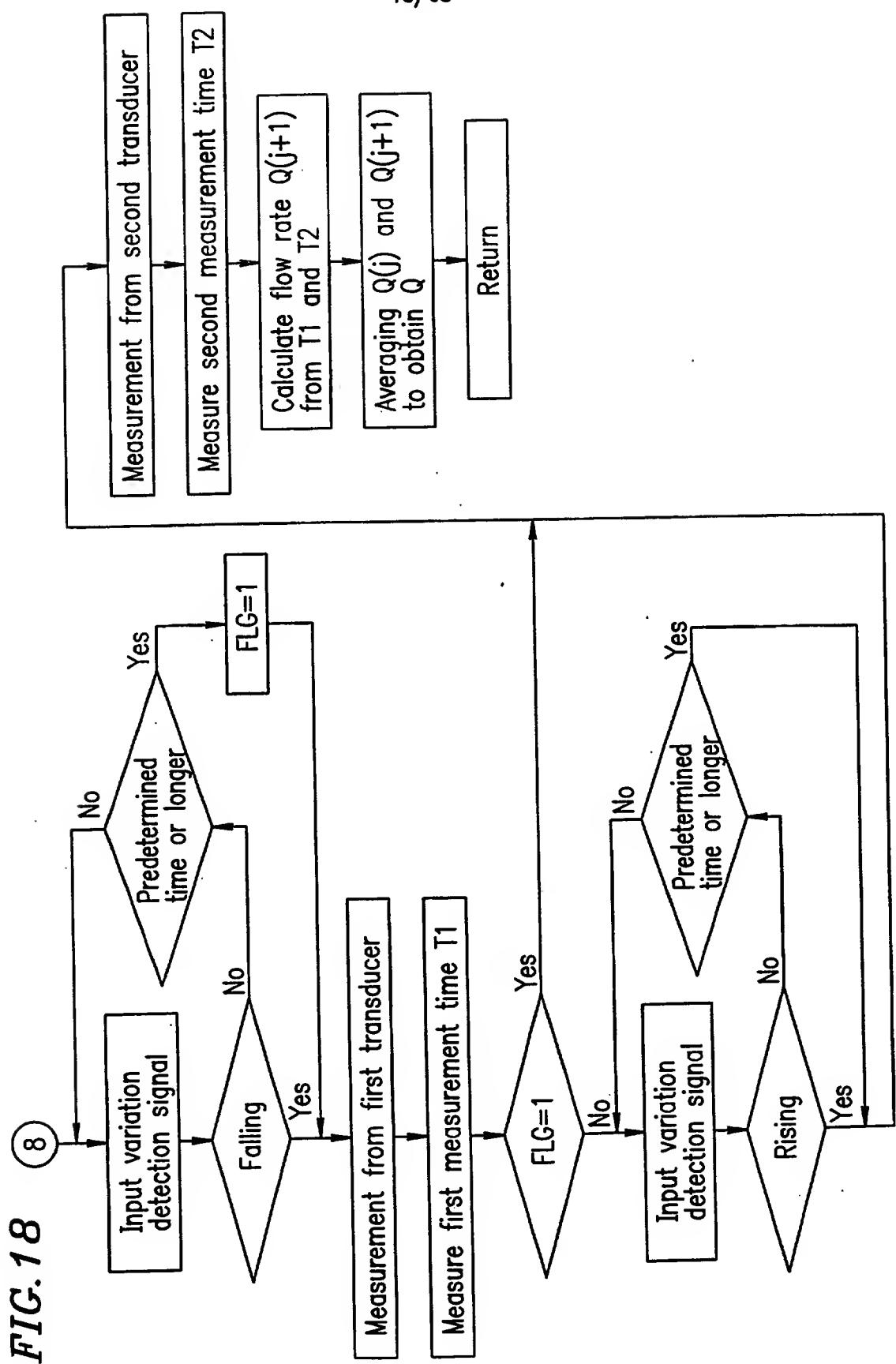


FIG. 15









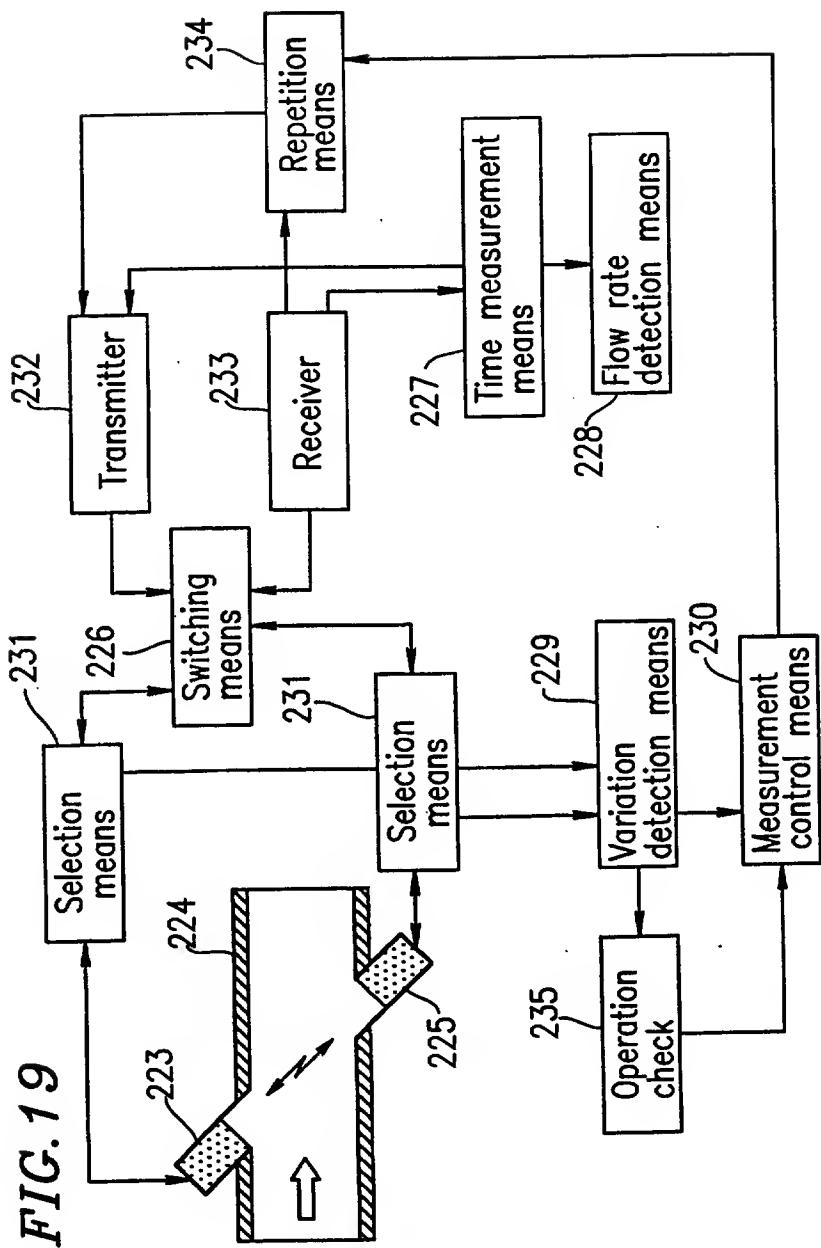


FIG. 20

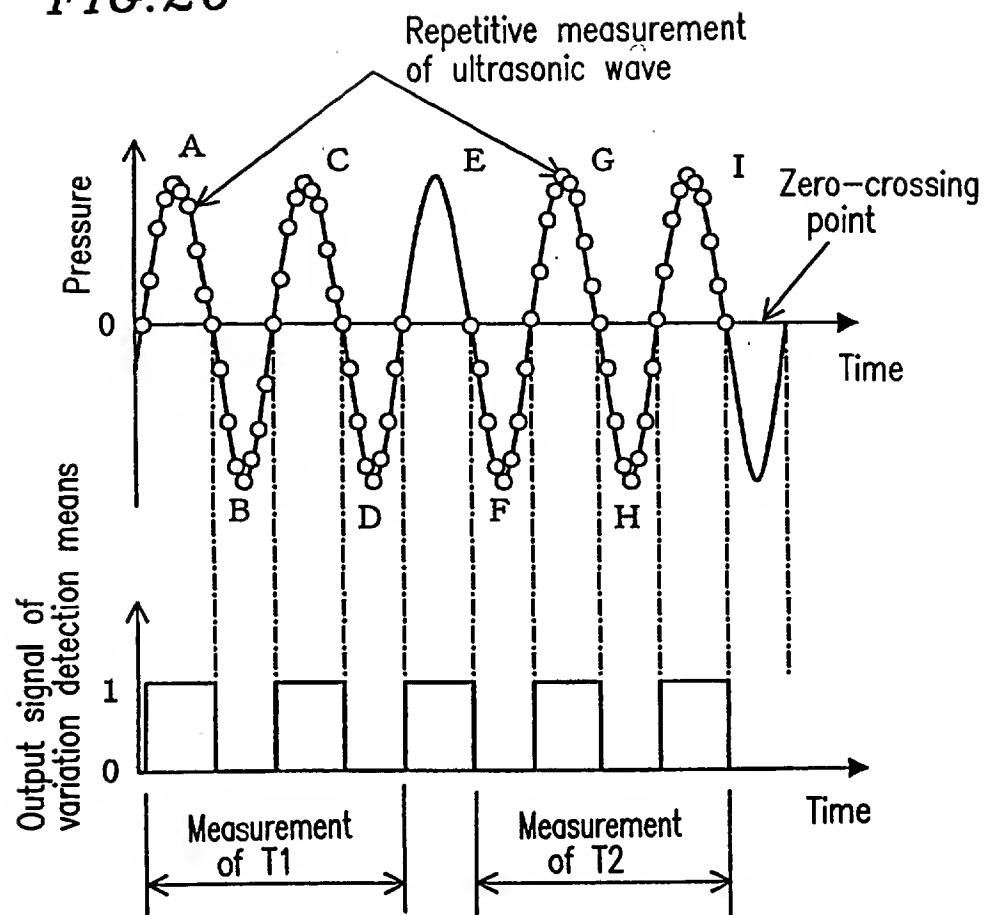


FIG.21

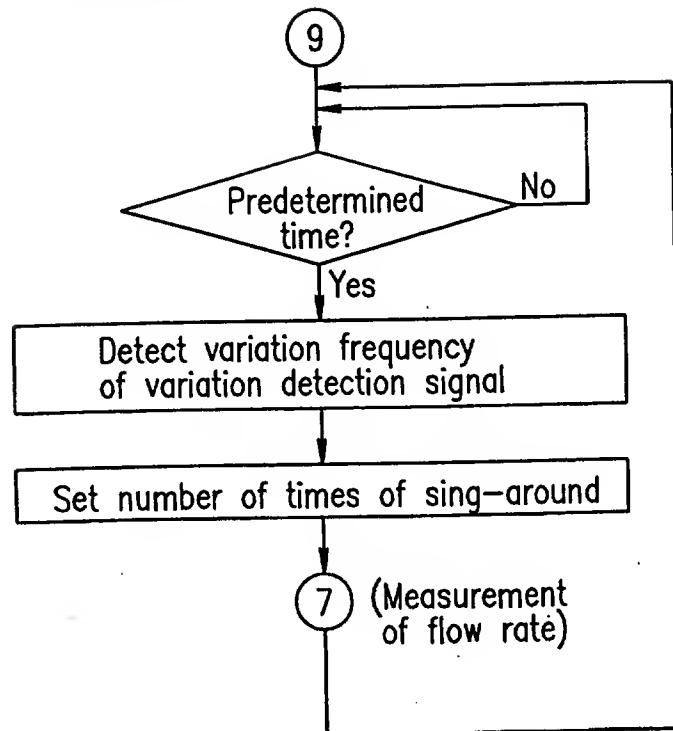


FIG. 22

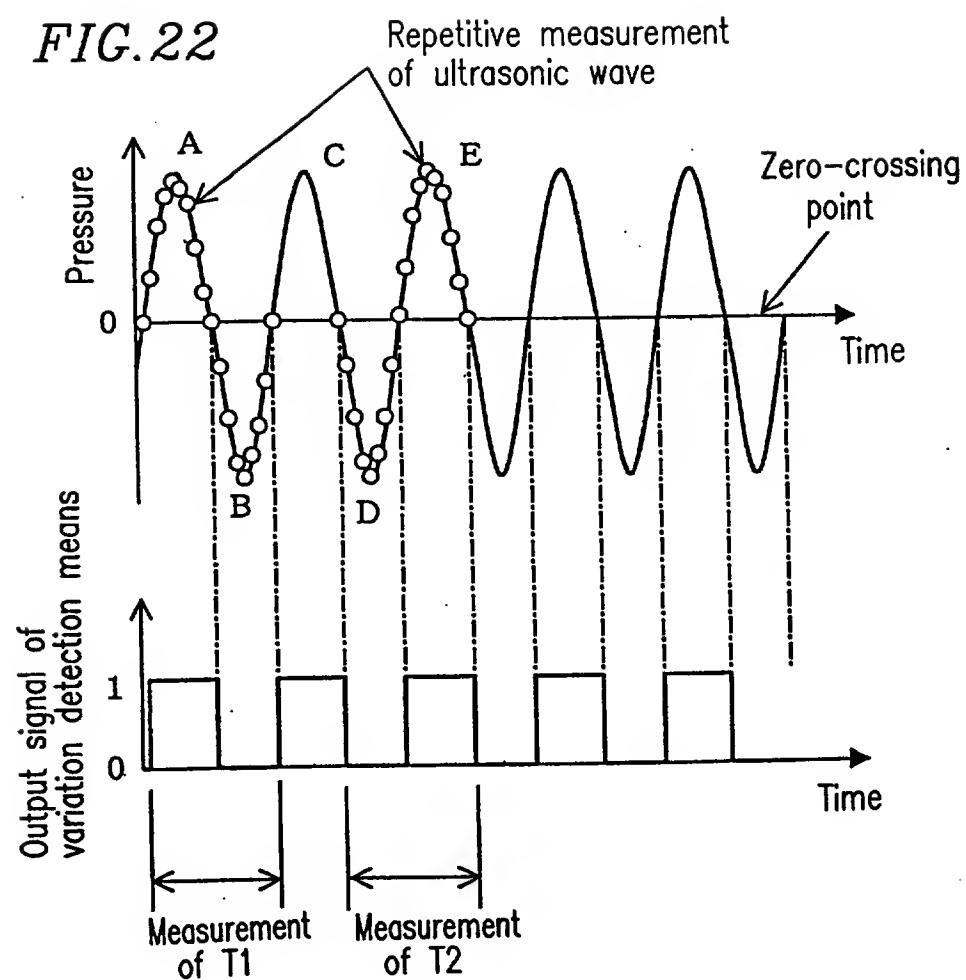
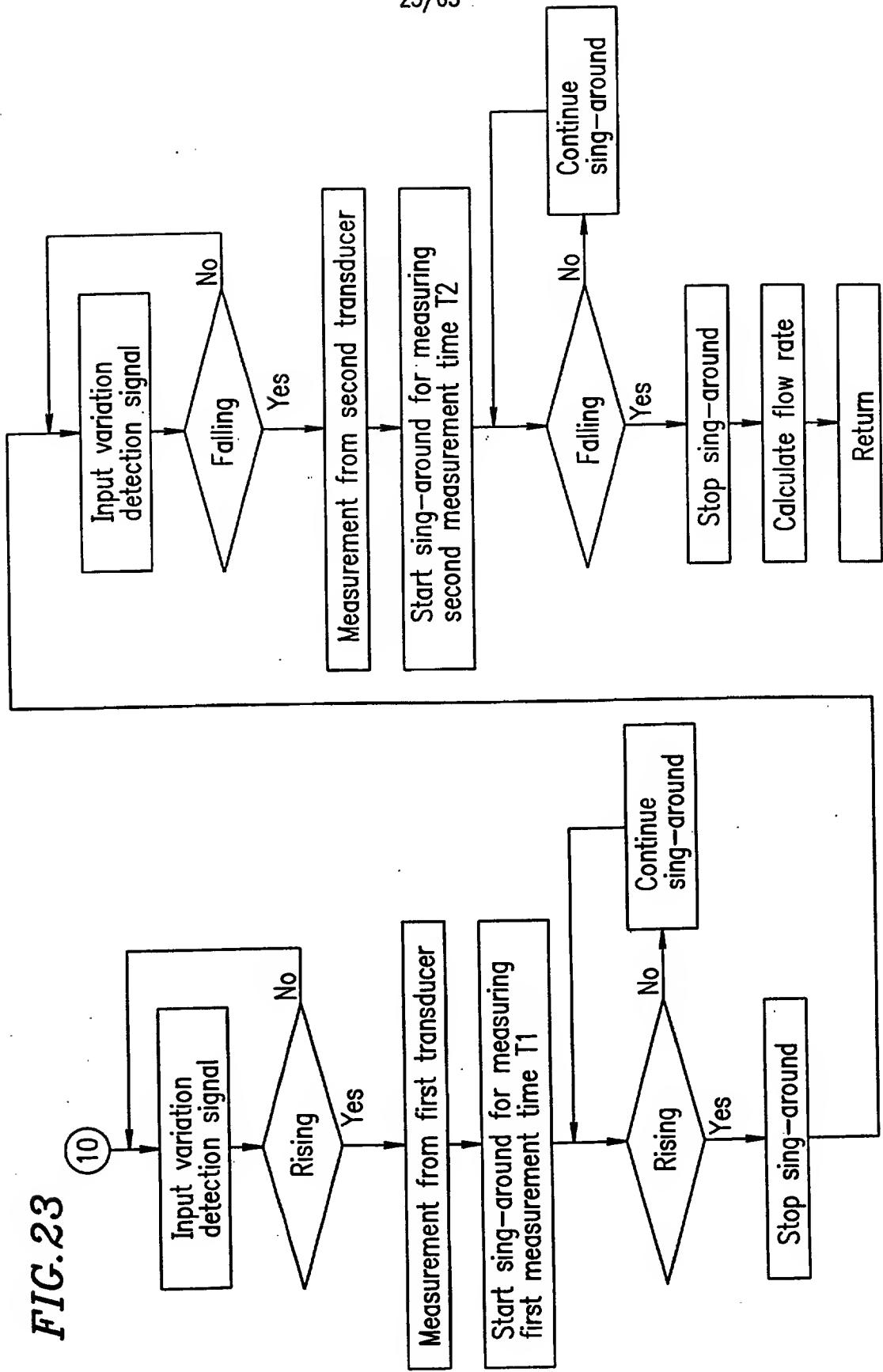


FIG. 23



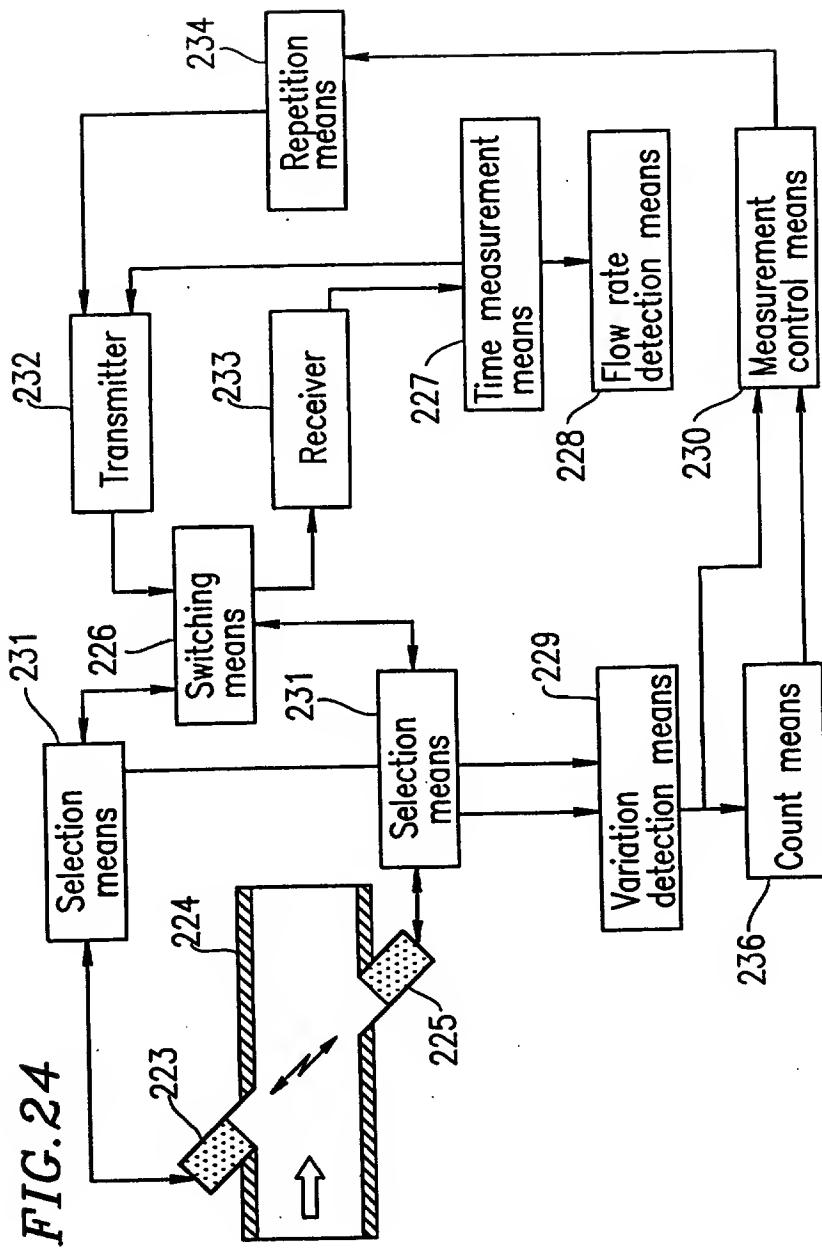
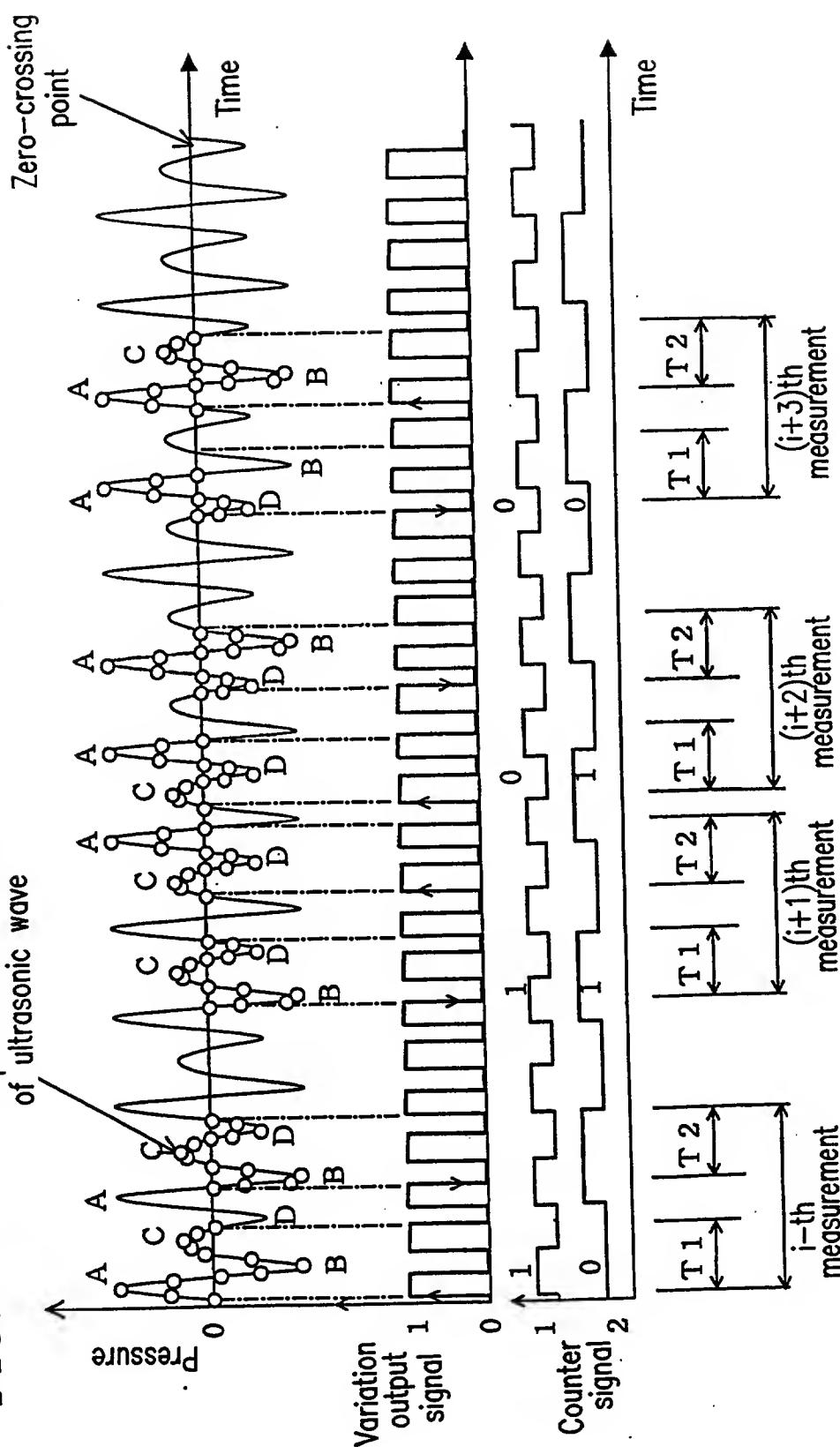
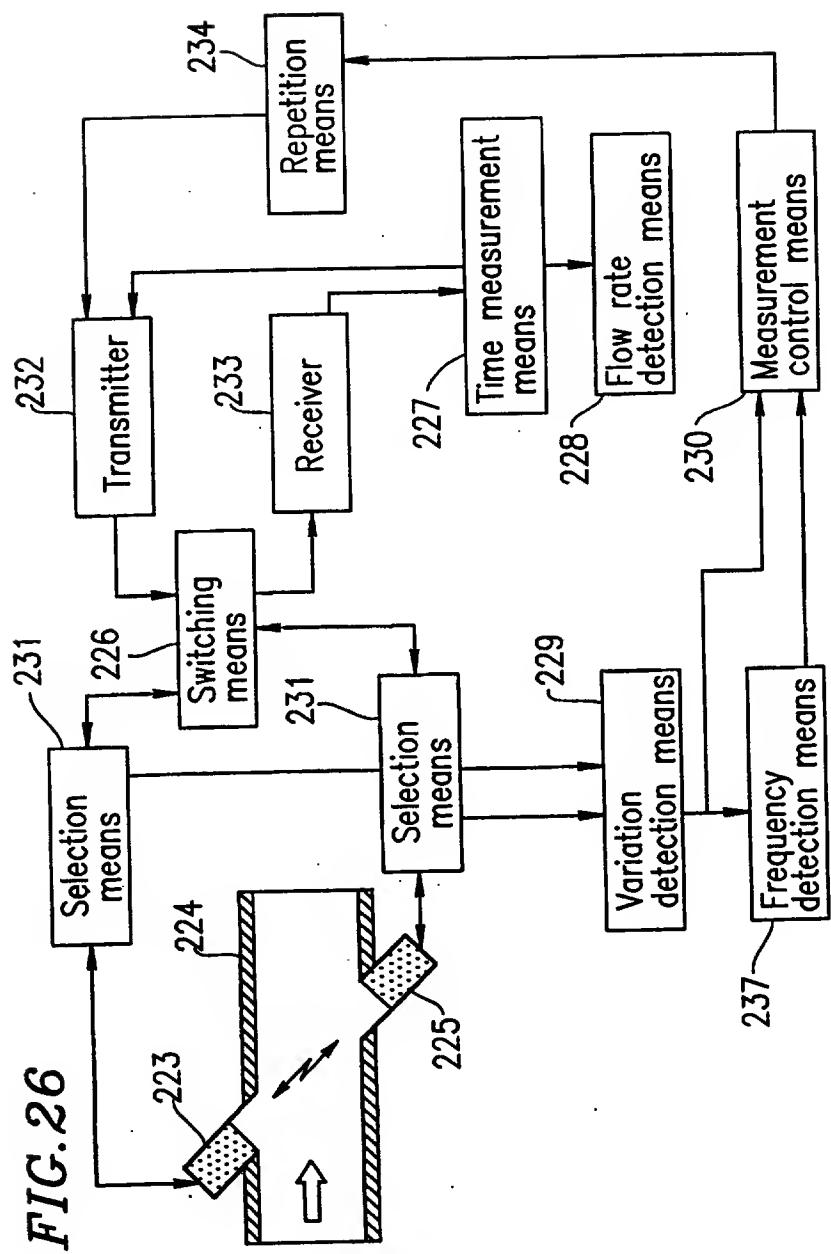
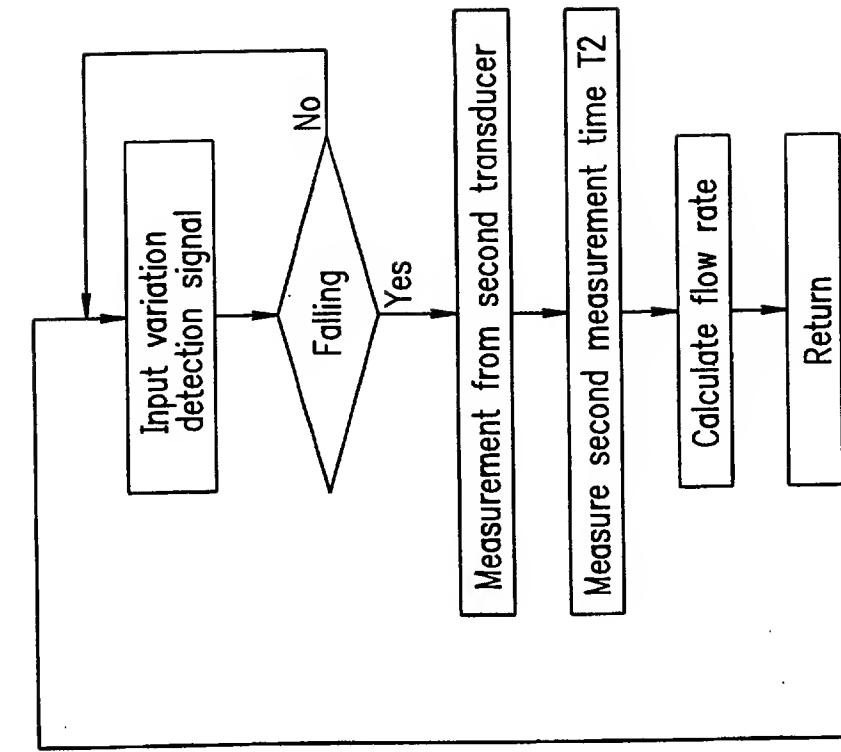
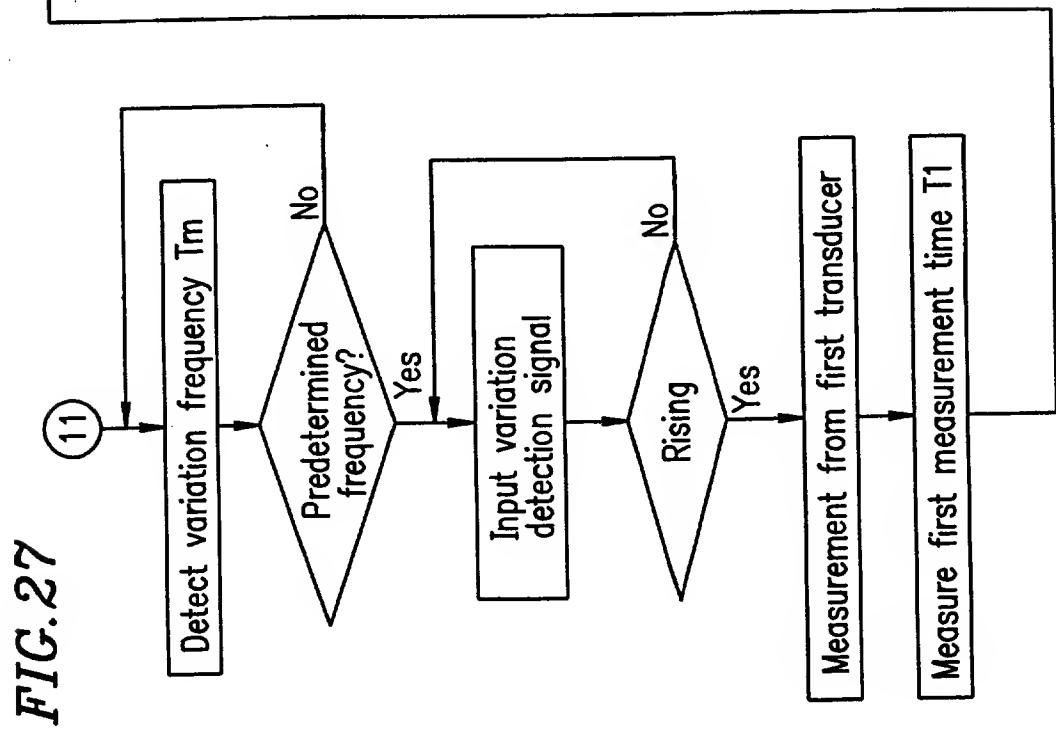


FIG. 25 Repetitive measurement of ultrasonic wave







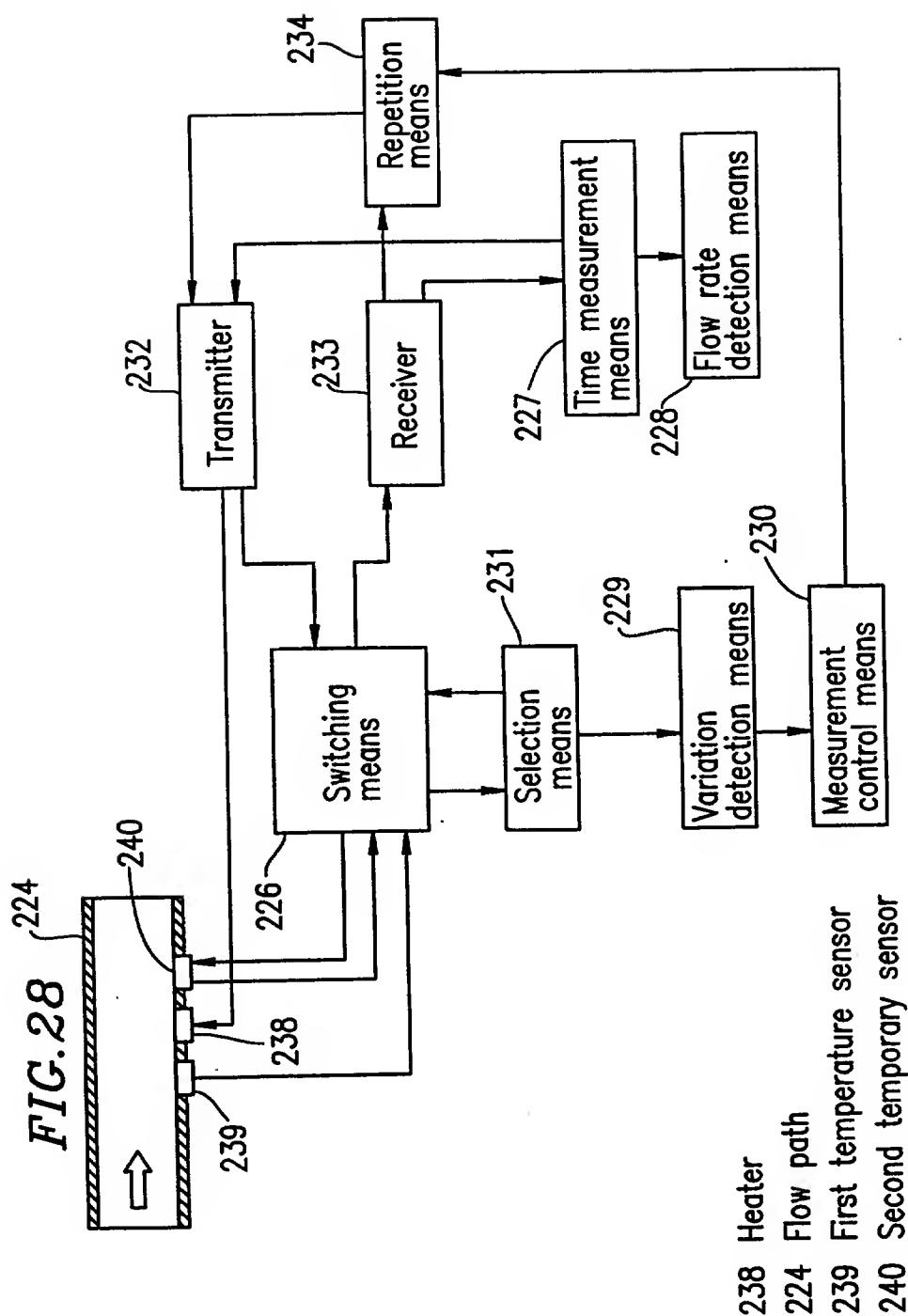
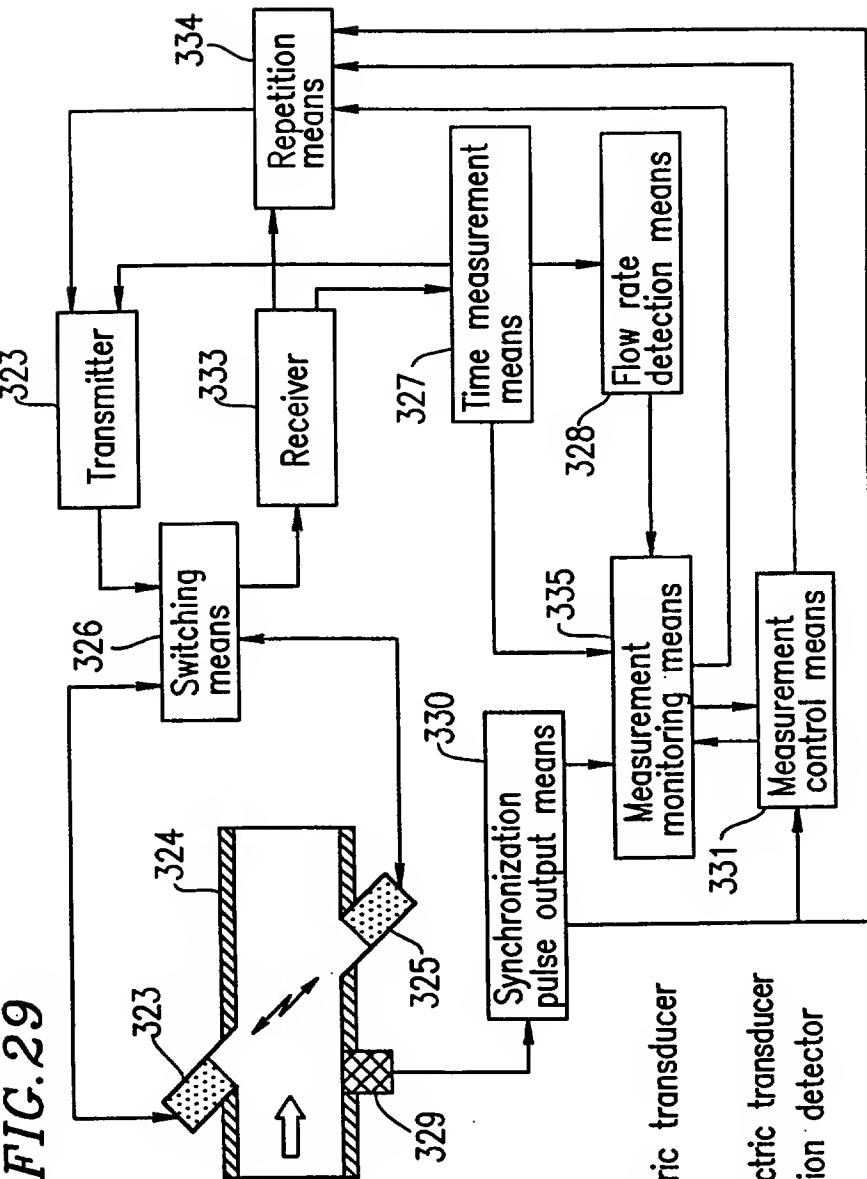


FIG. 29

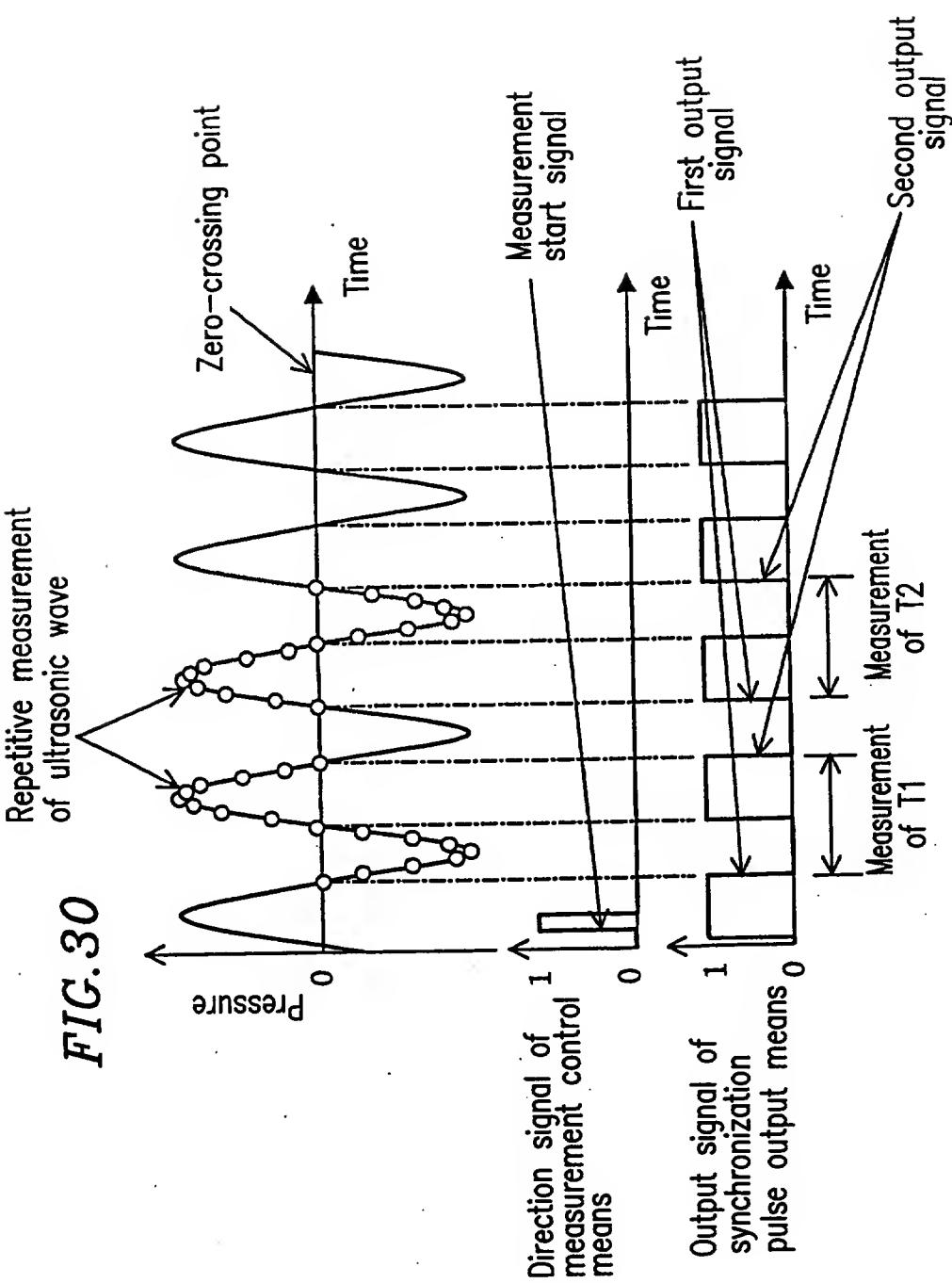


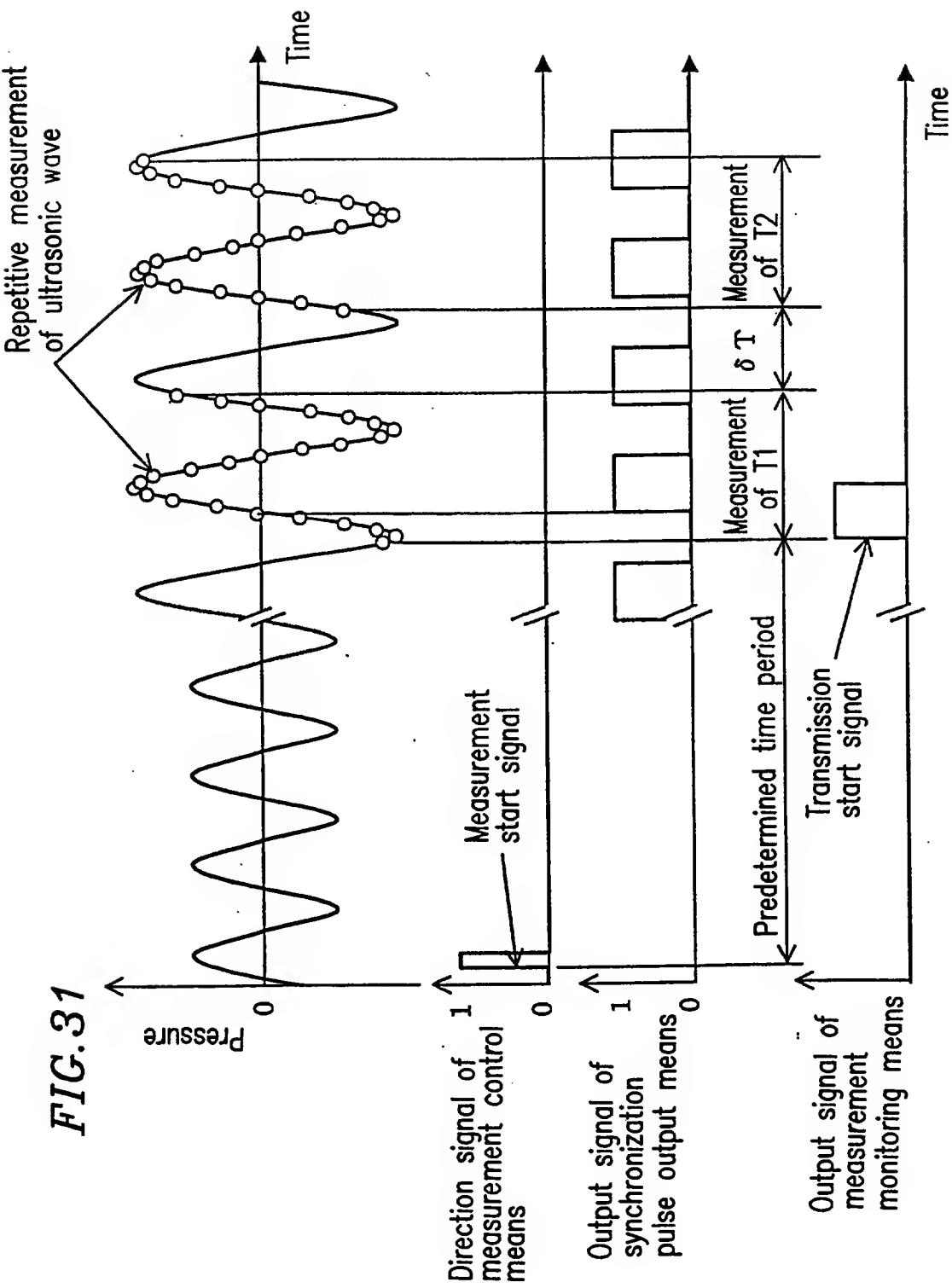
323 First piezoelectric transducer

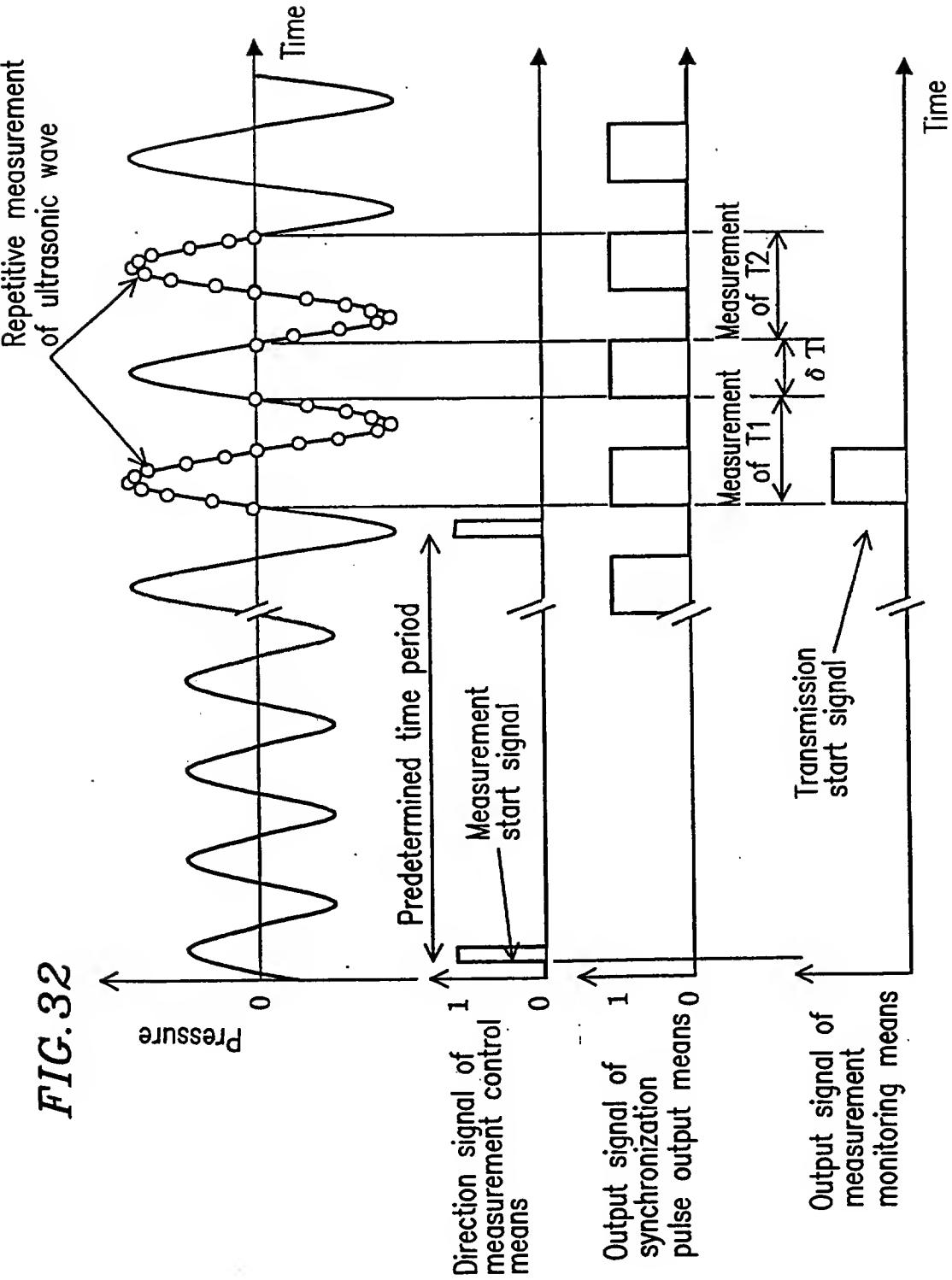
324 Flow path

325 Second piezoelectric transducer

329 Pressure variation detector







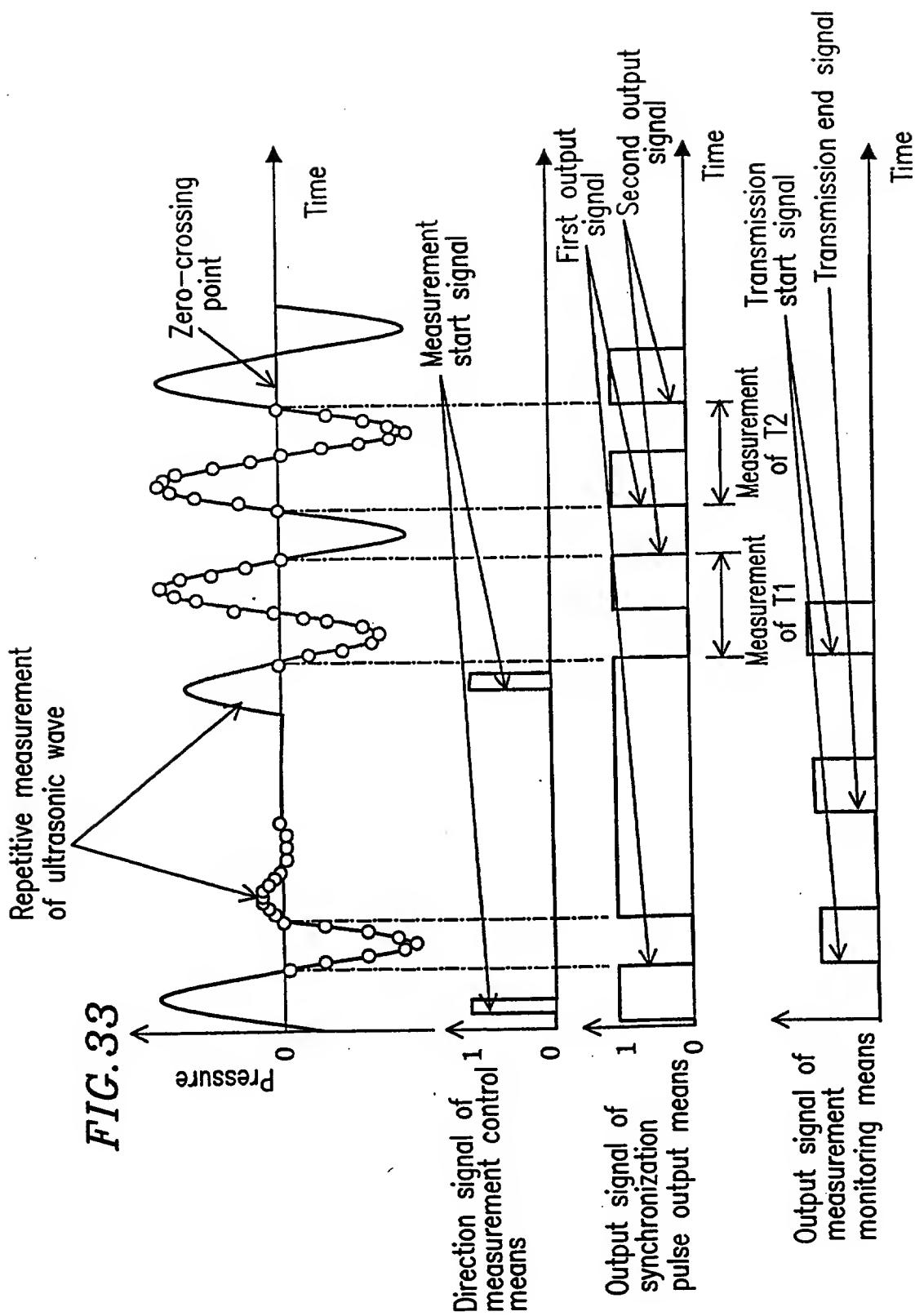


FIG.34

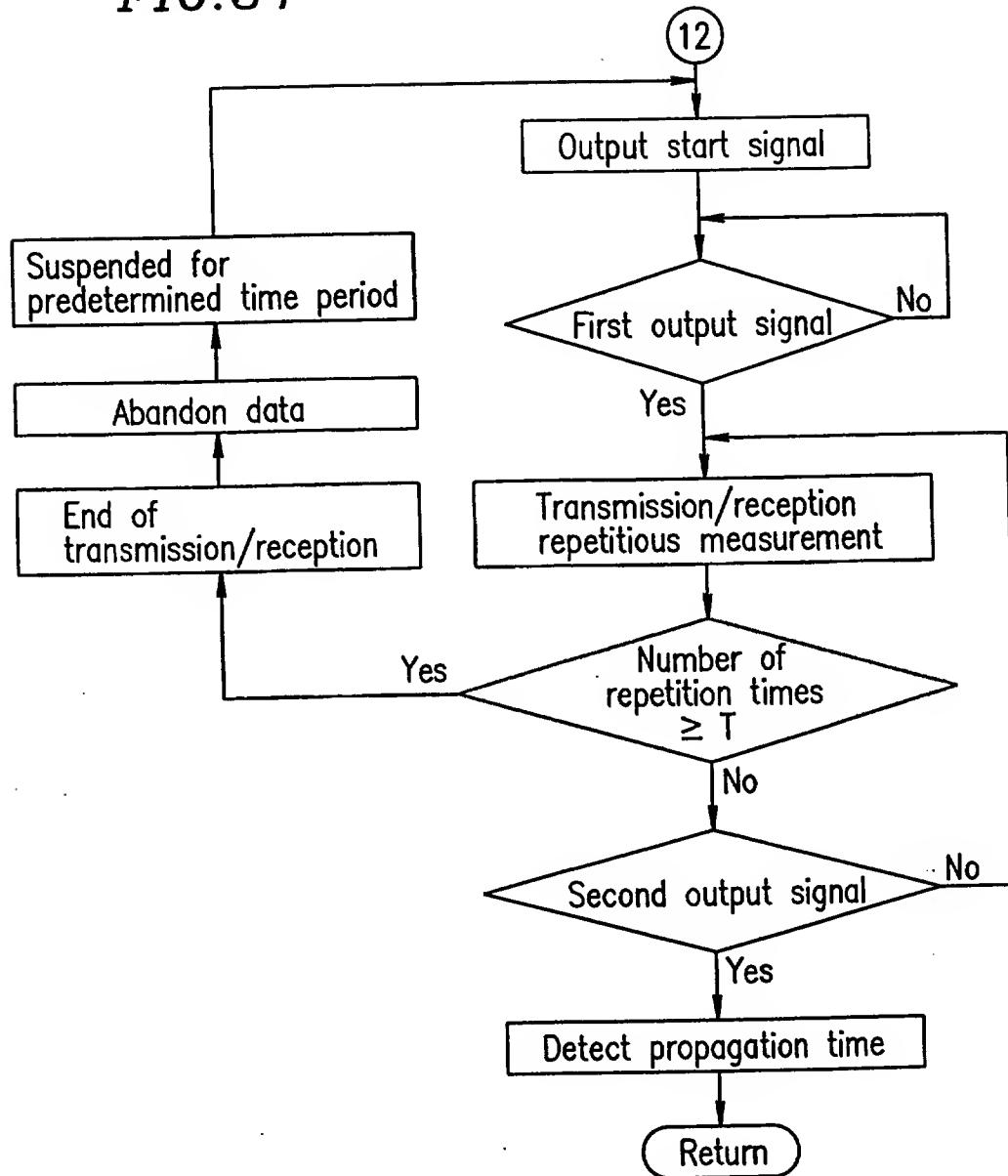


FIG. 35

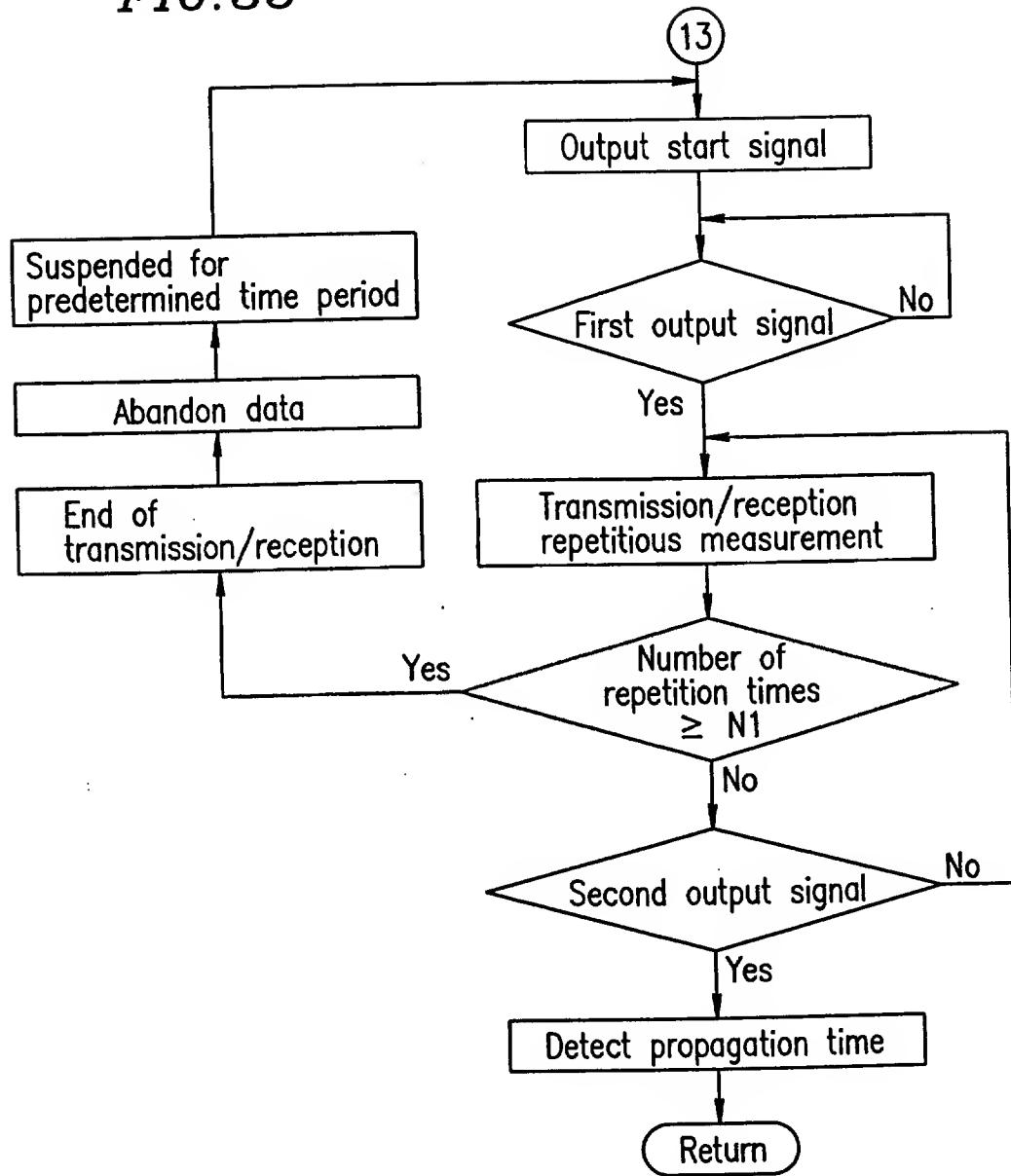


FIG.36

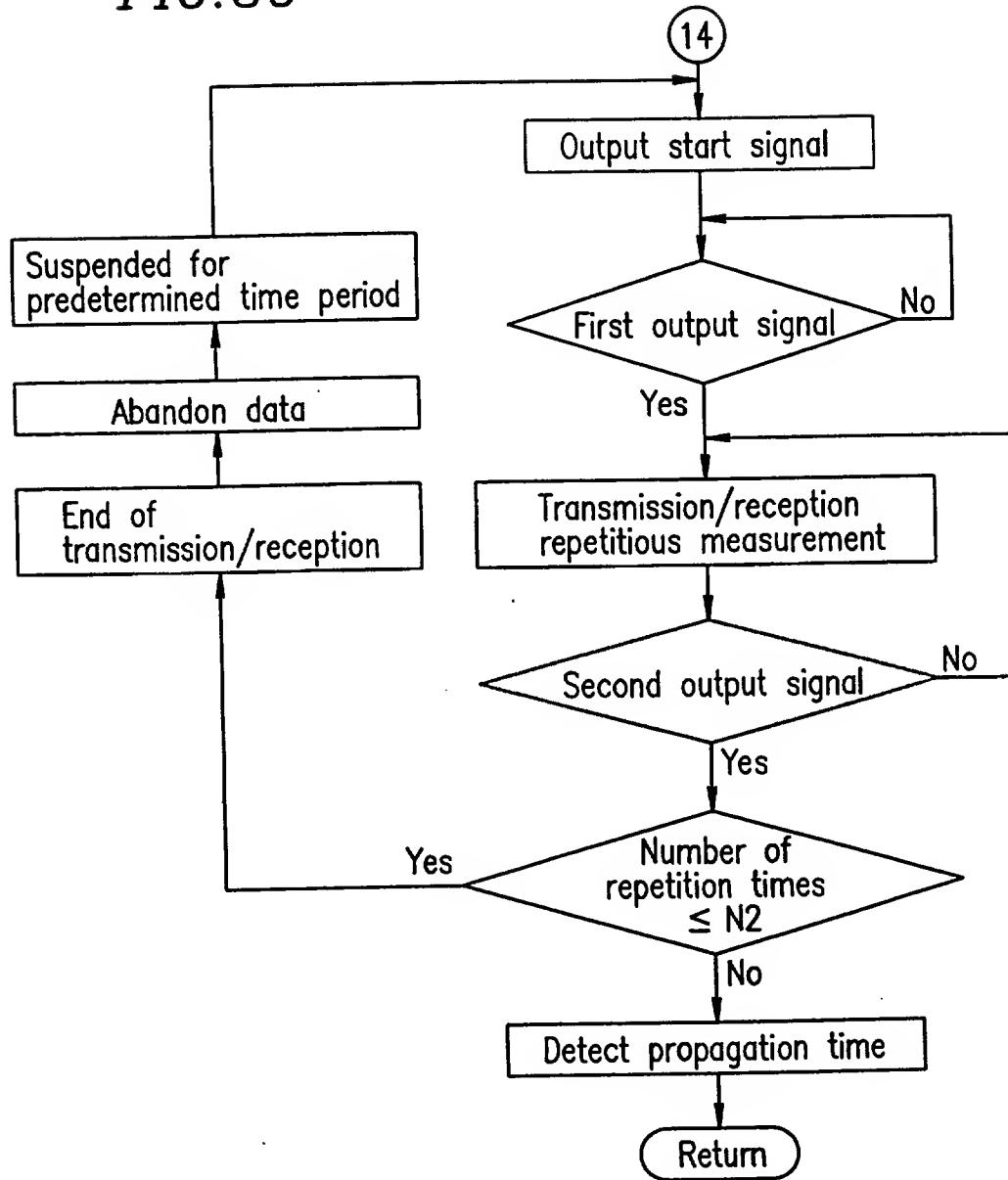


FIG.37

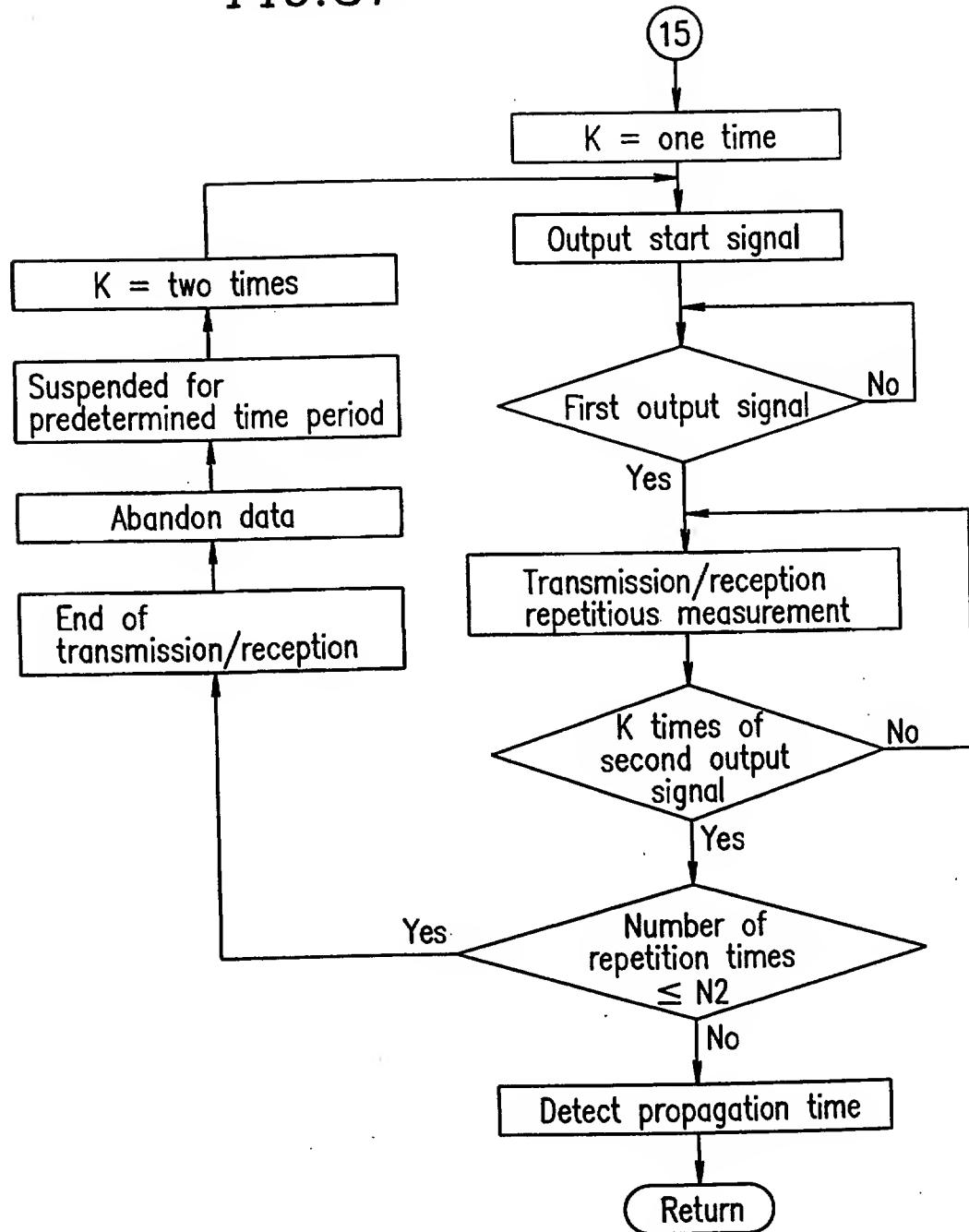


FIG. 38

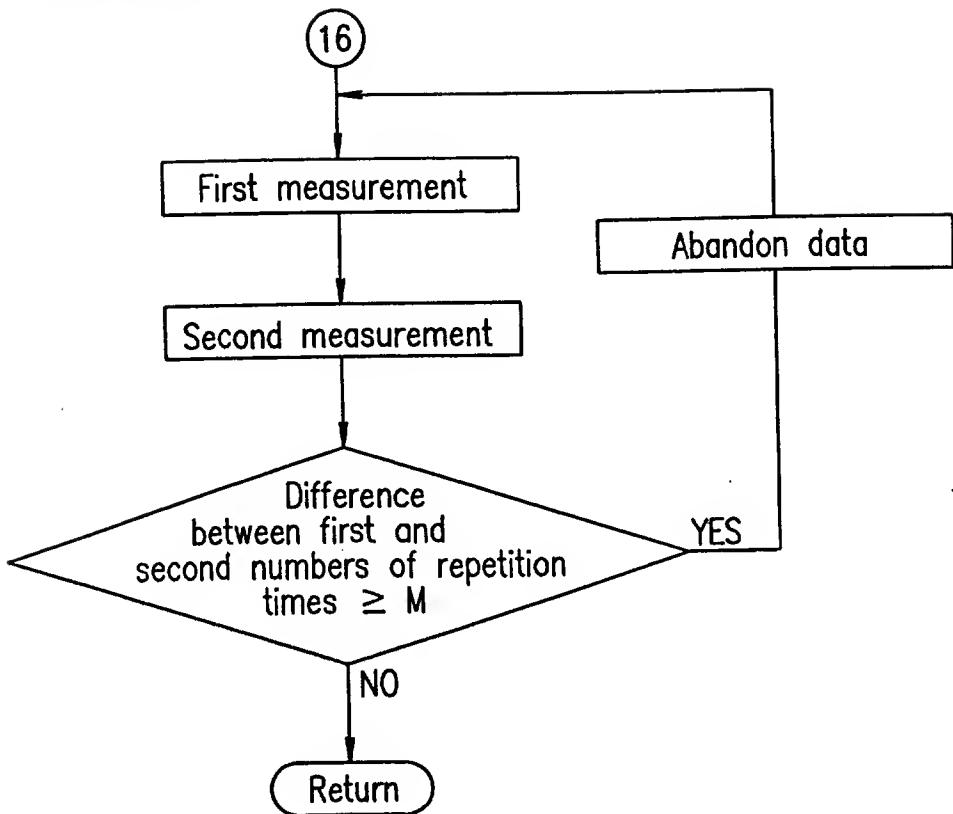
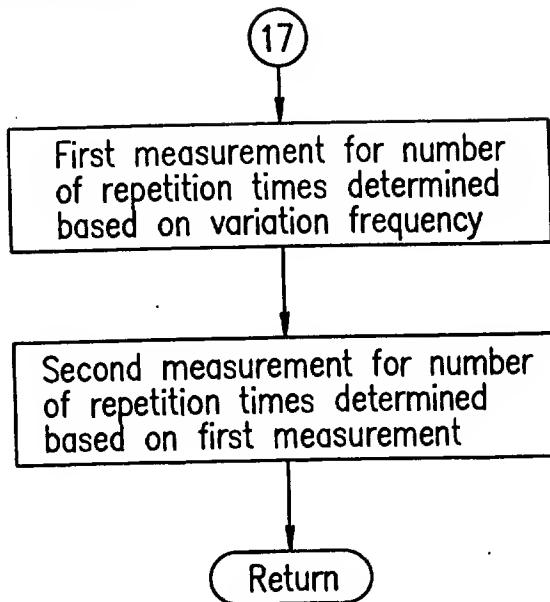
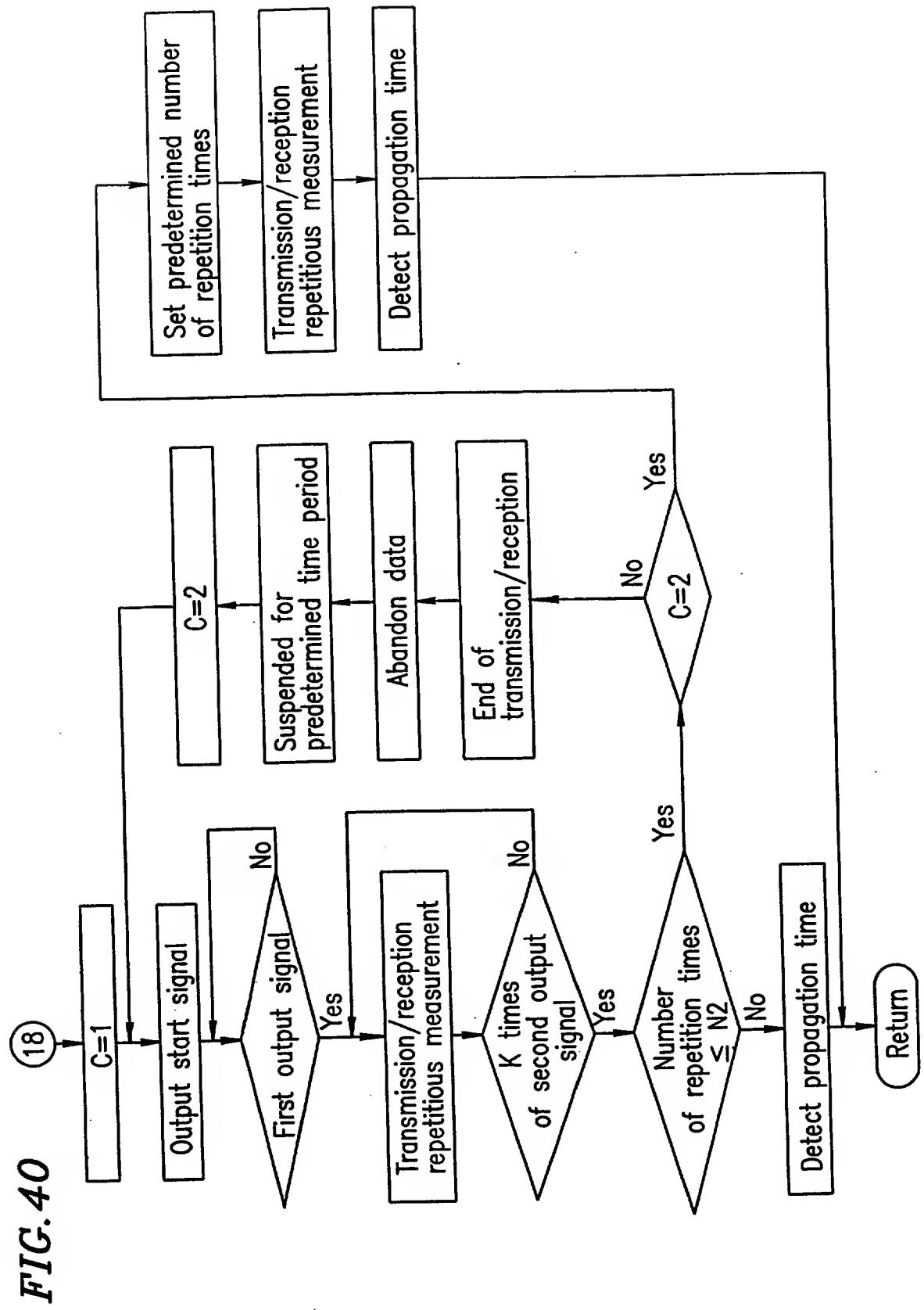


FIG. 39





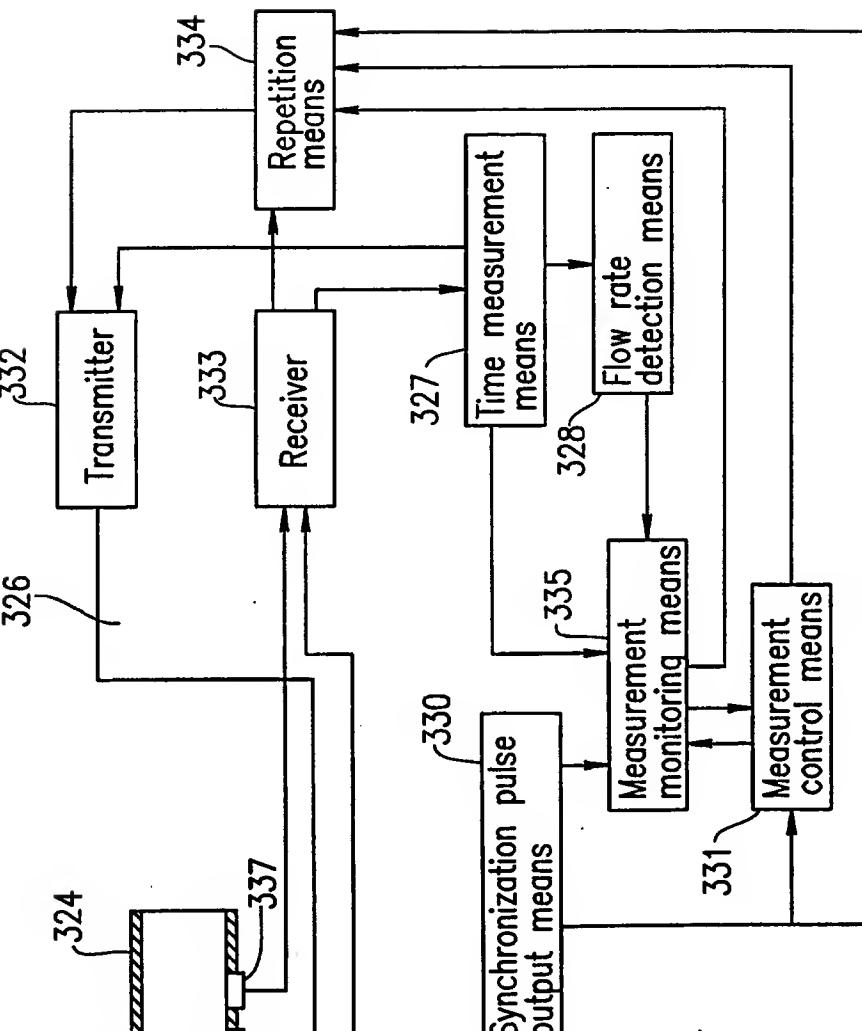


FIG. 41

324 Flow path
 329 Pressure variation detector
 336 Heater
 337 Temperature sensor

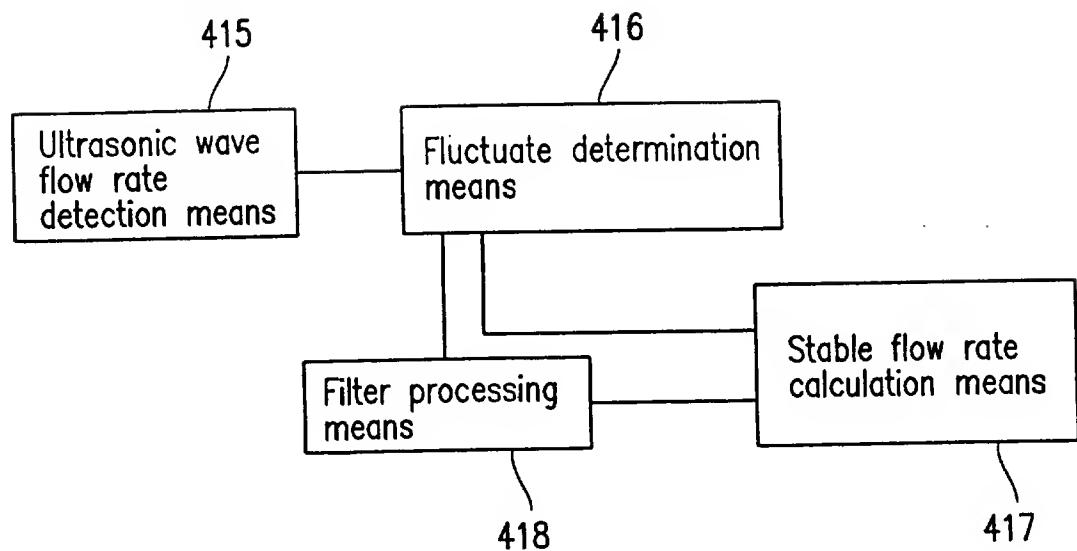
FIG. 42

FIG. 43

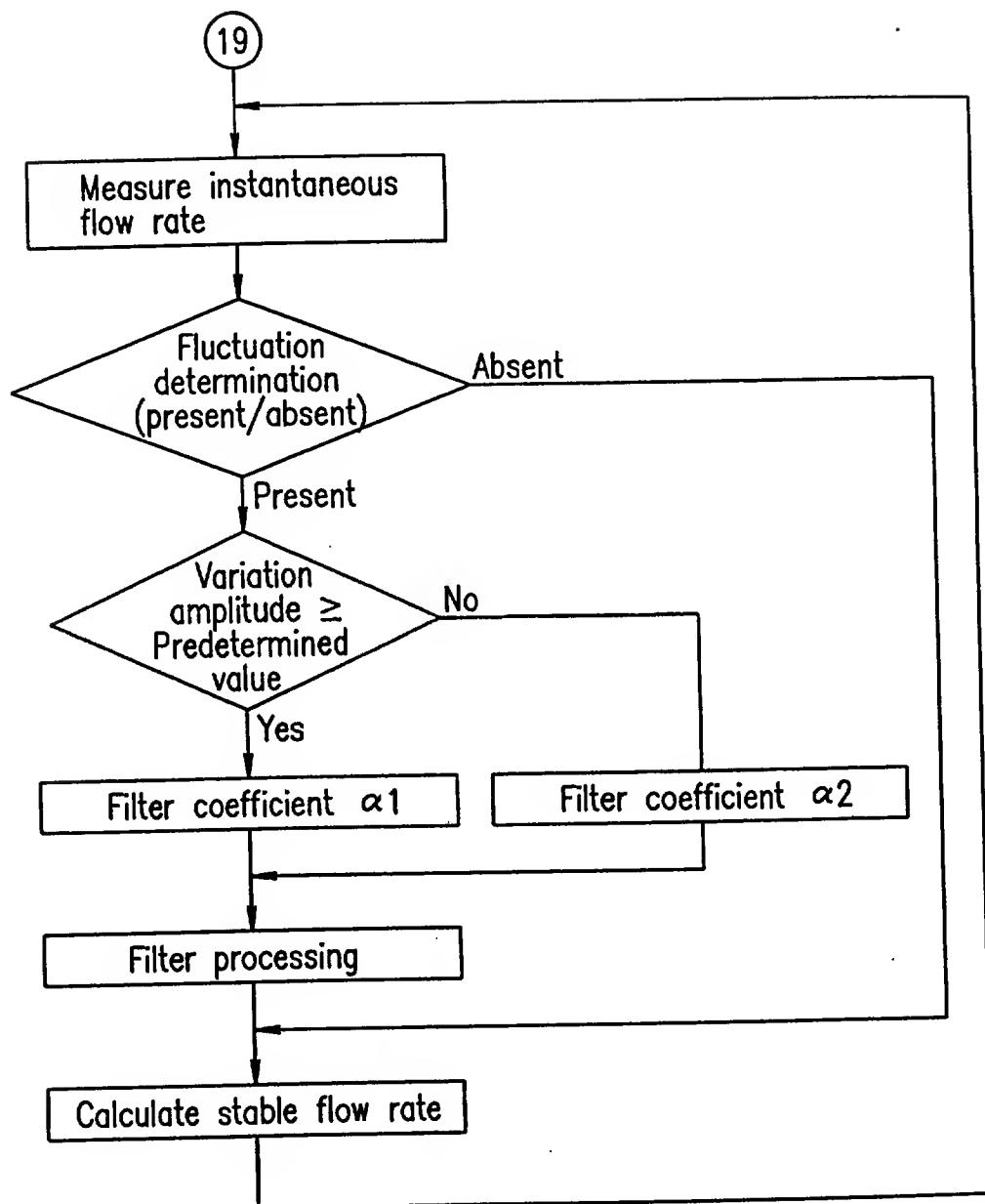


FIG. 44

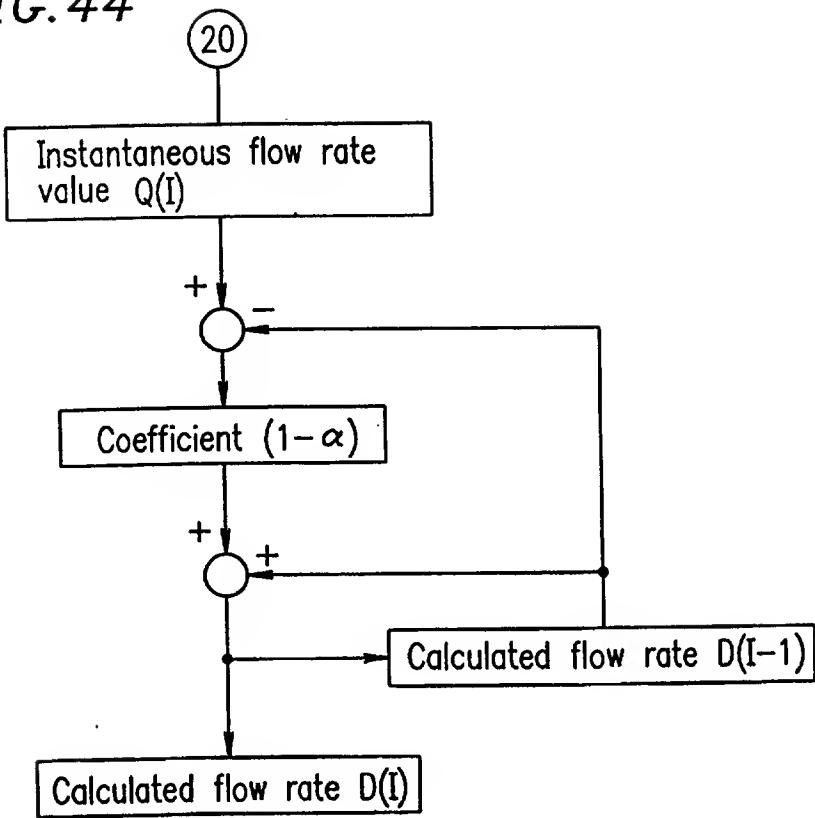


FIG. 45

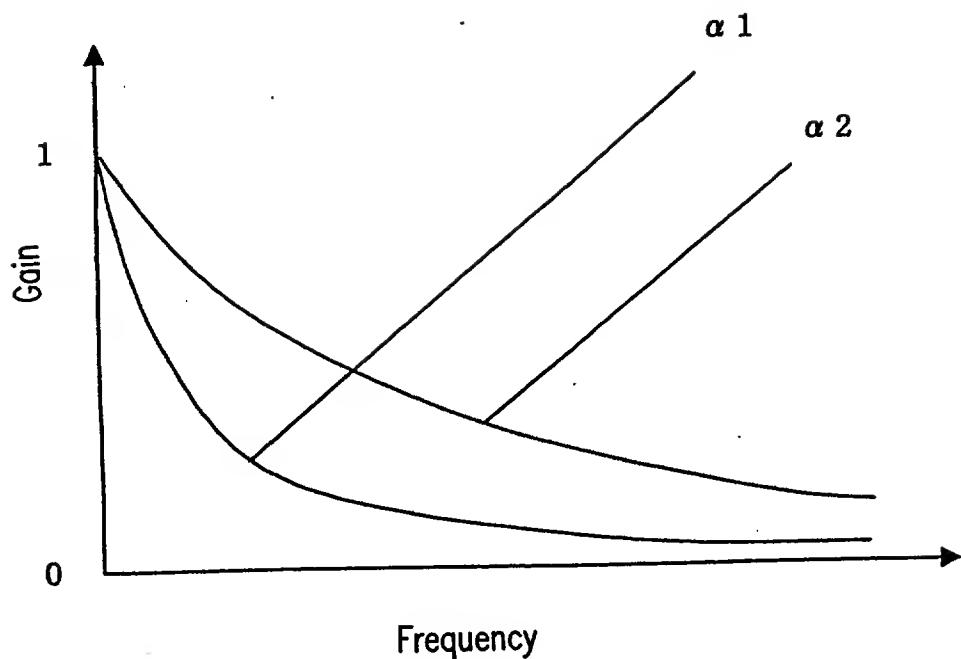


FIG. 46

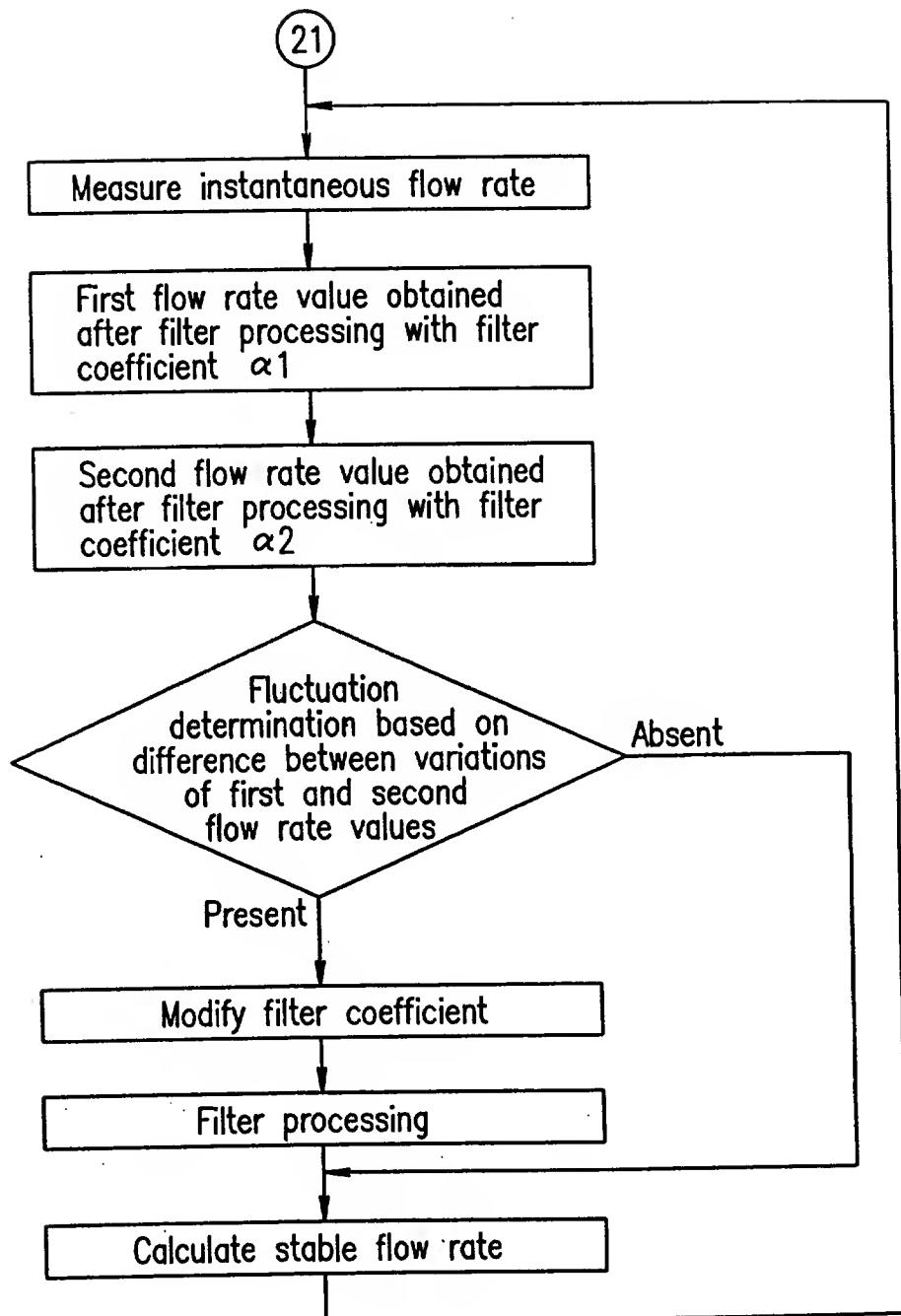


FIG.47

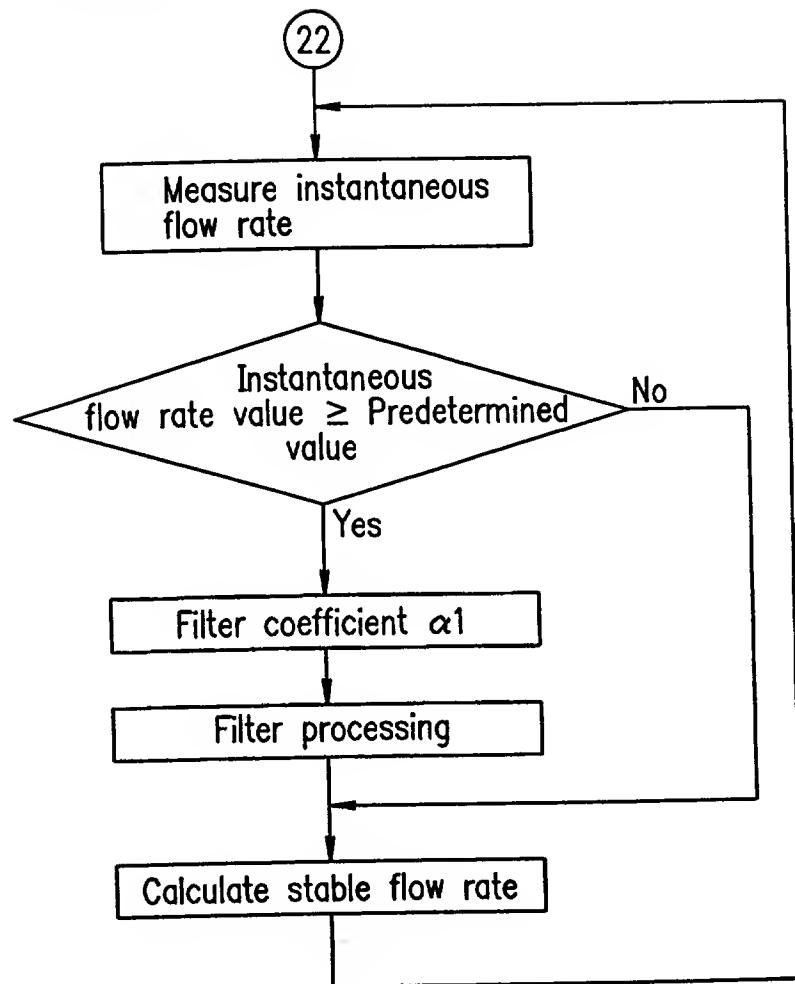


FIG.48

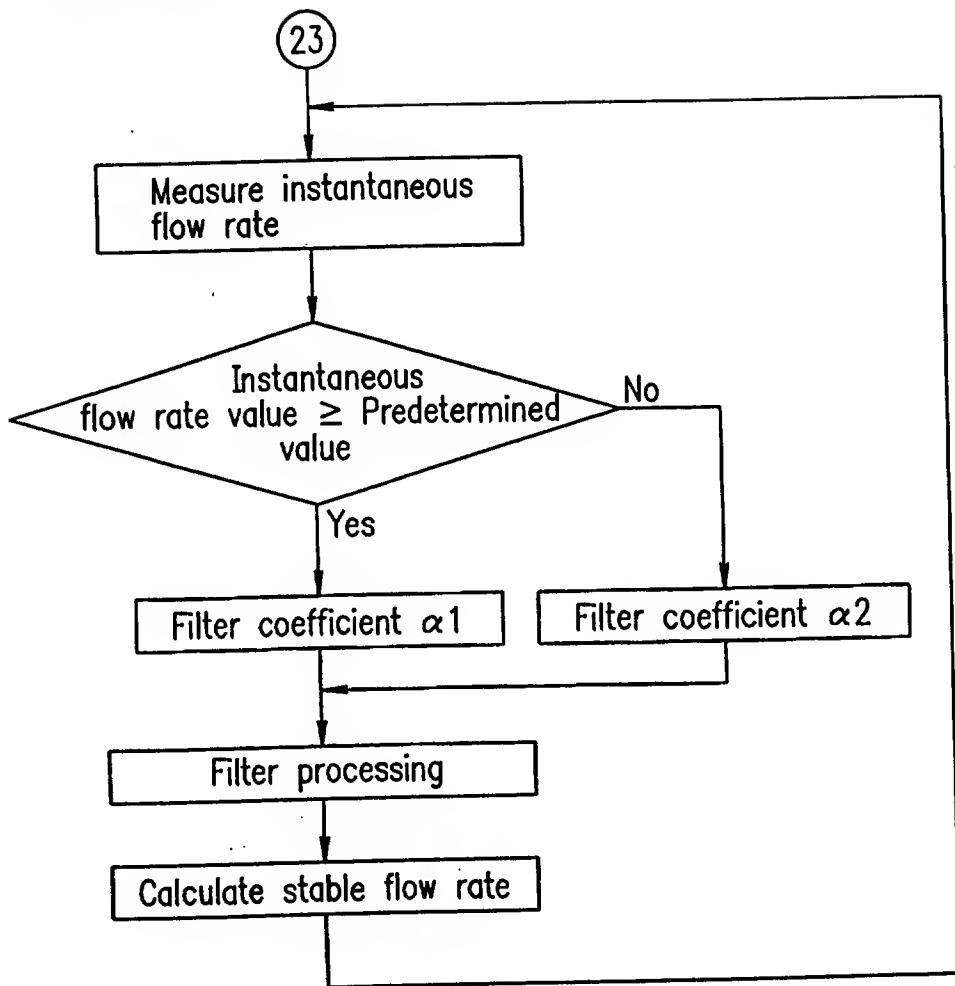


FIG. 49

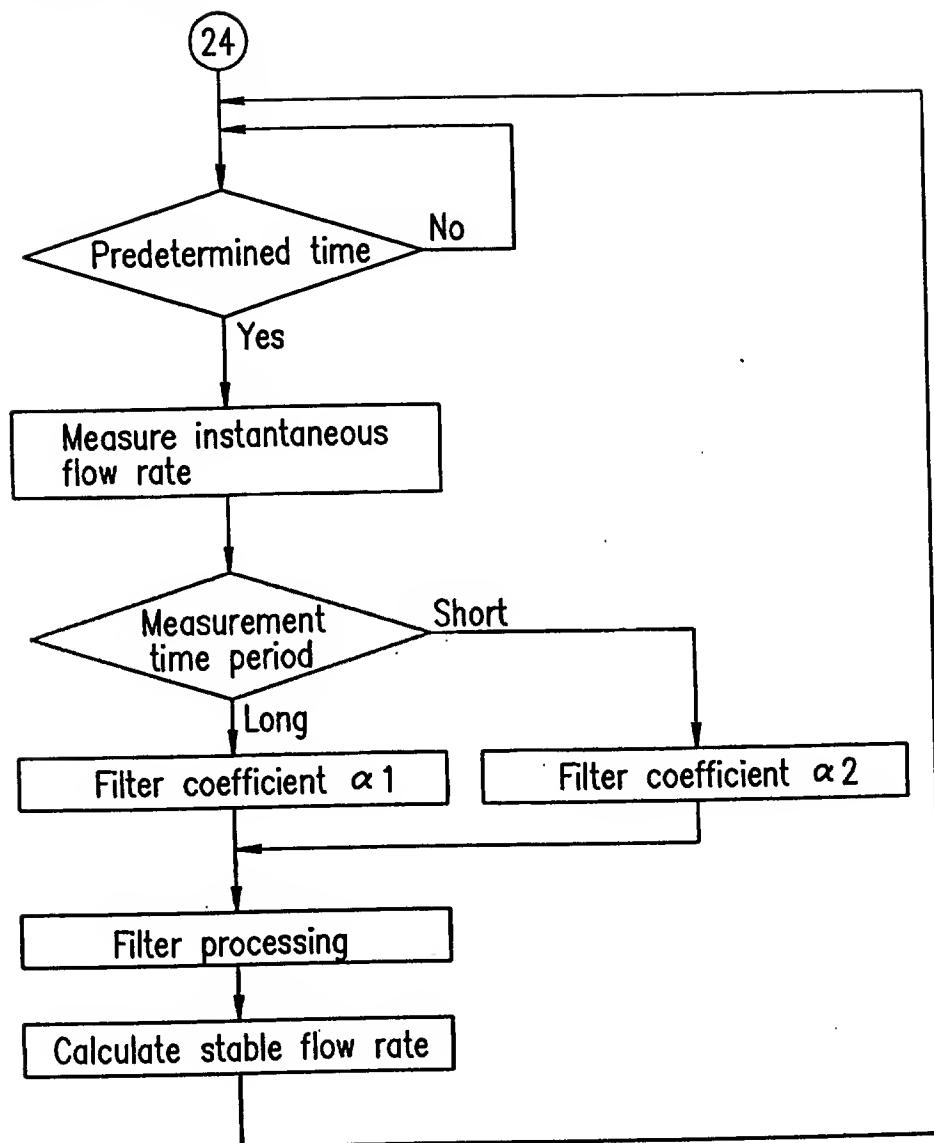


FIG.50

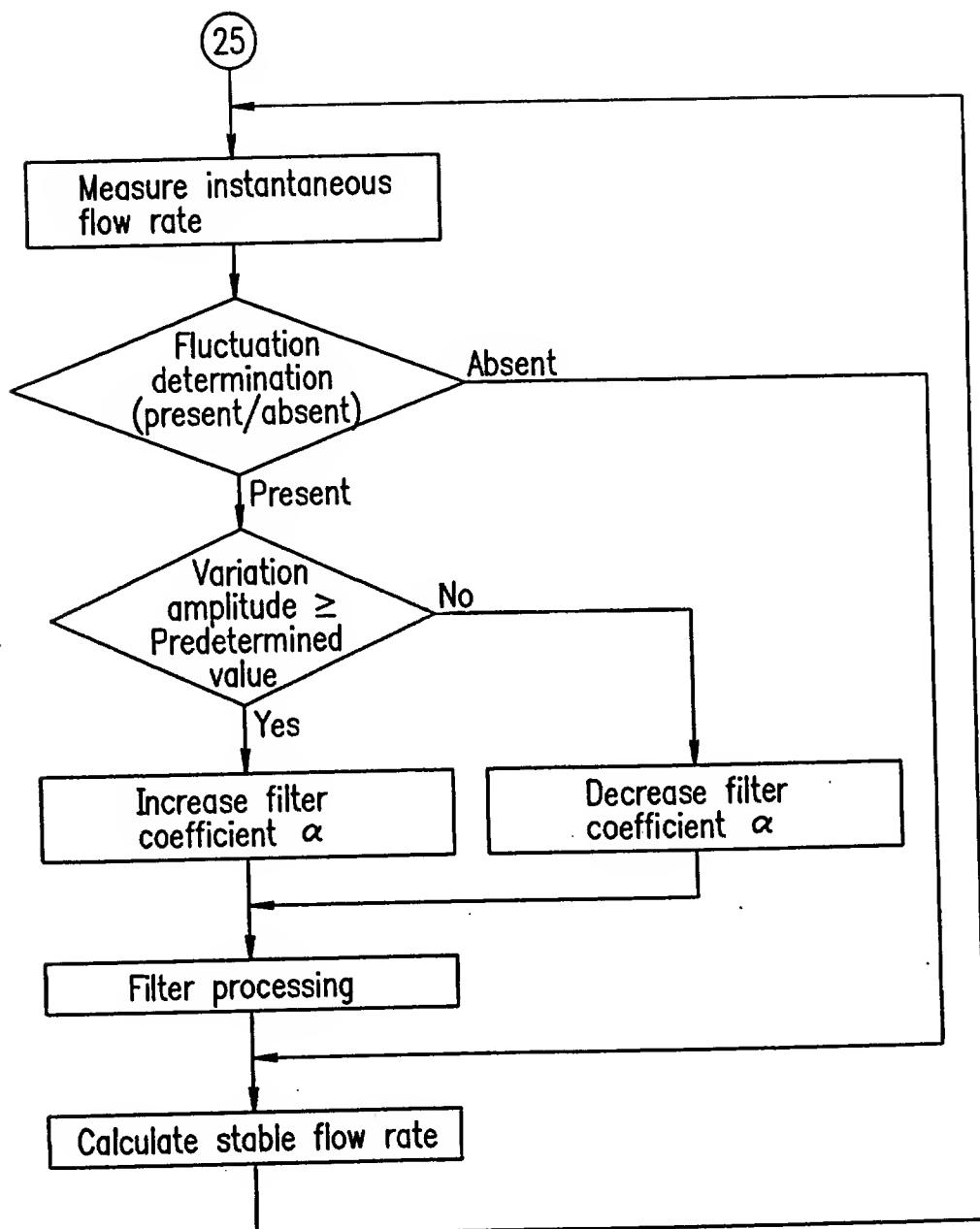


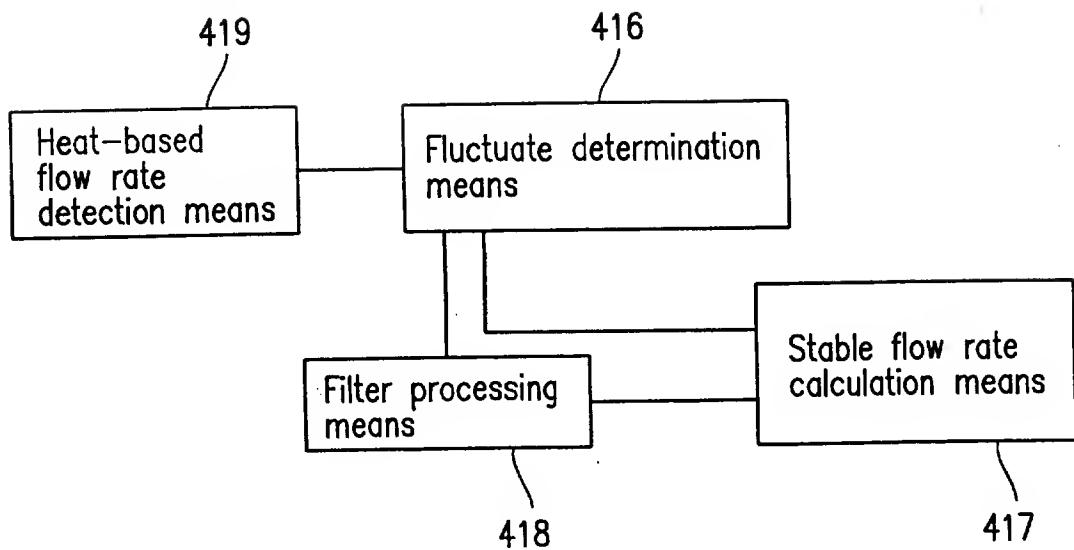
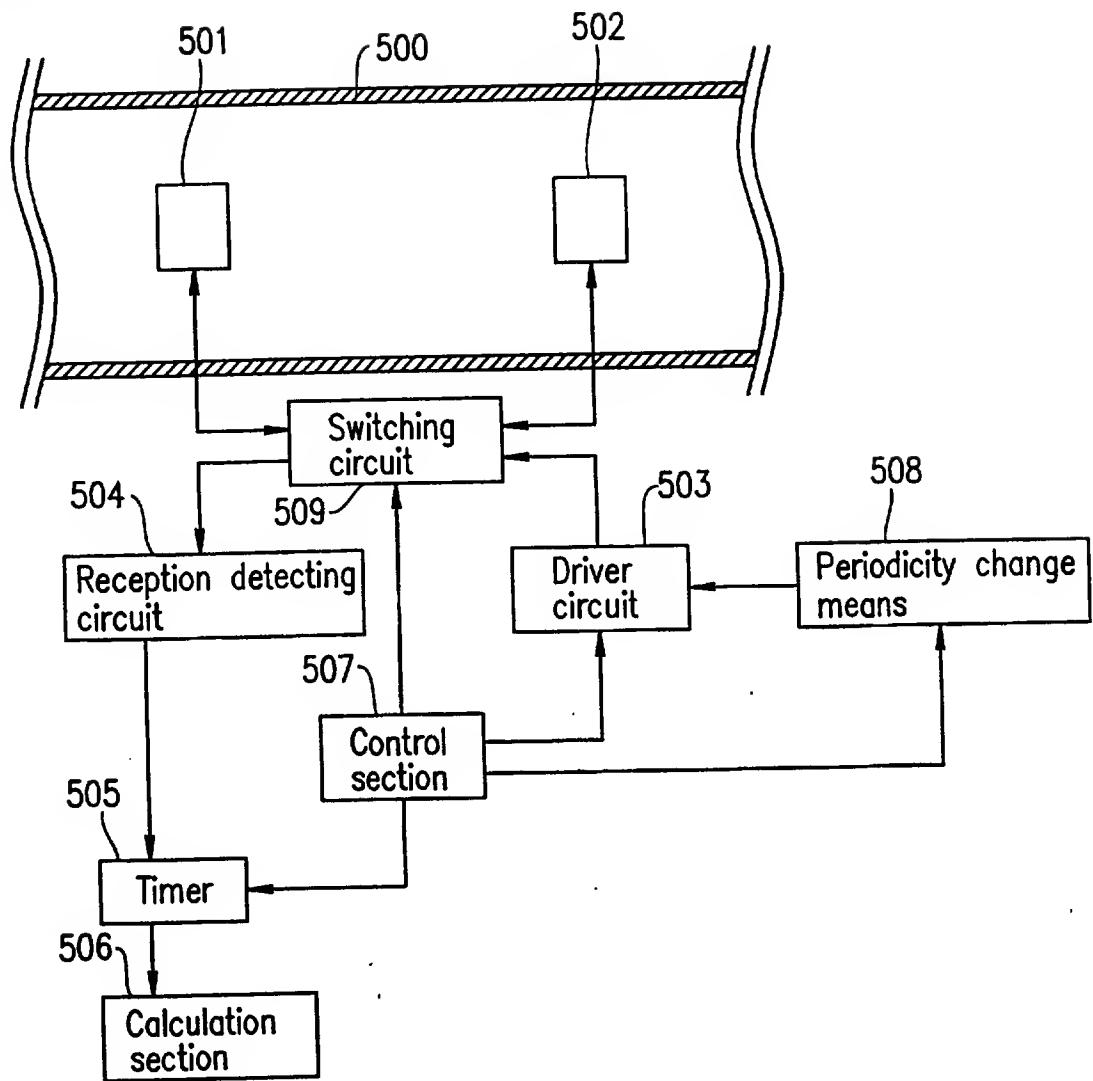
FIG.51

FIG. 52



500 Flow rate measurement section

501,502 Ultrasonic wave transducer

503 Driver circuit

504 Reception detecting circuit

505 Timer

507 Control section

506 Calculation section

508 Periodicity change means

FIG.53

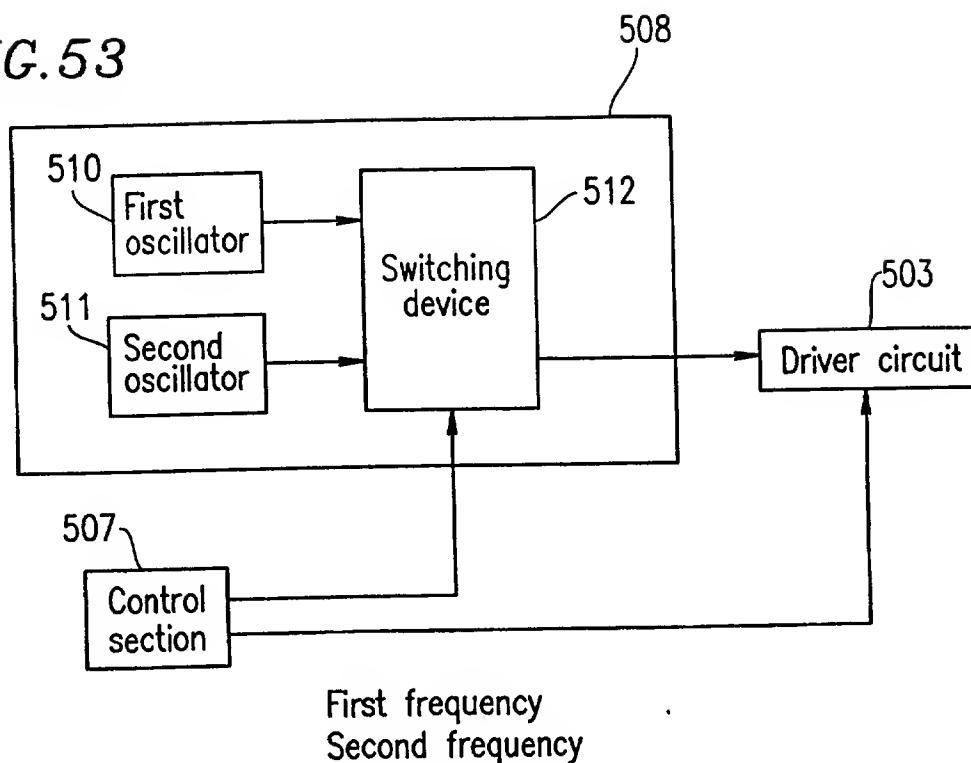


FIG.54

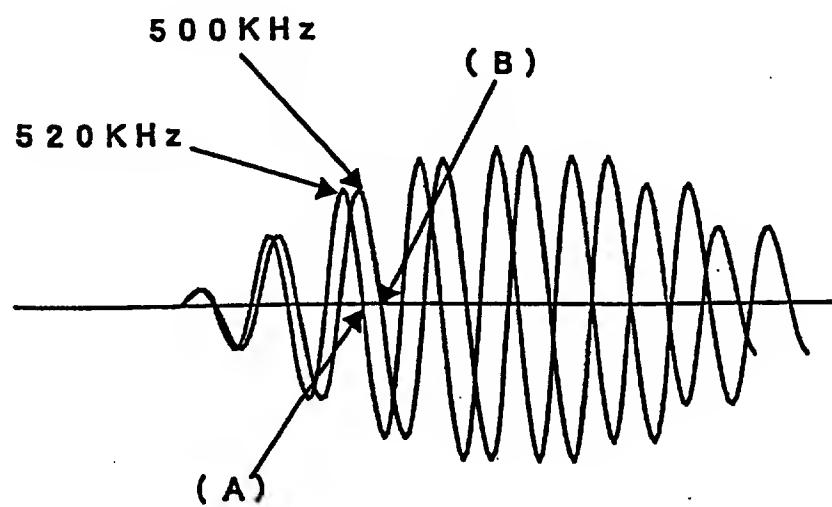


FIG.55

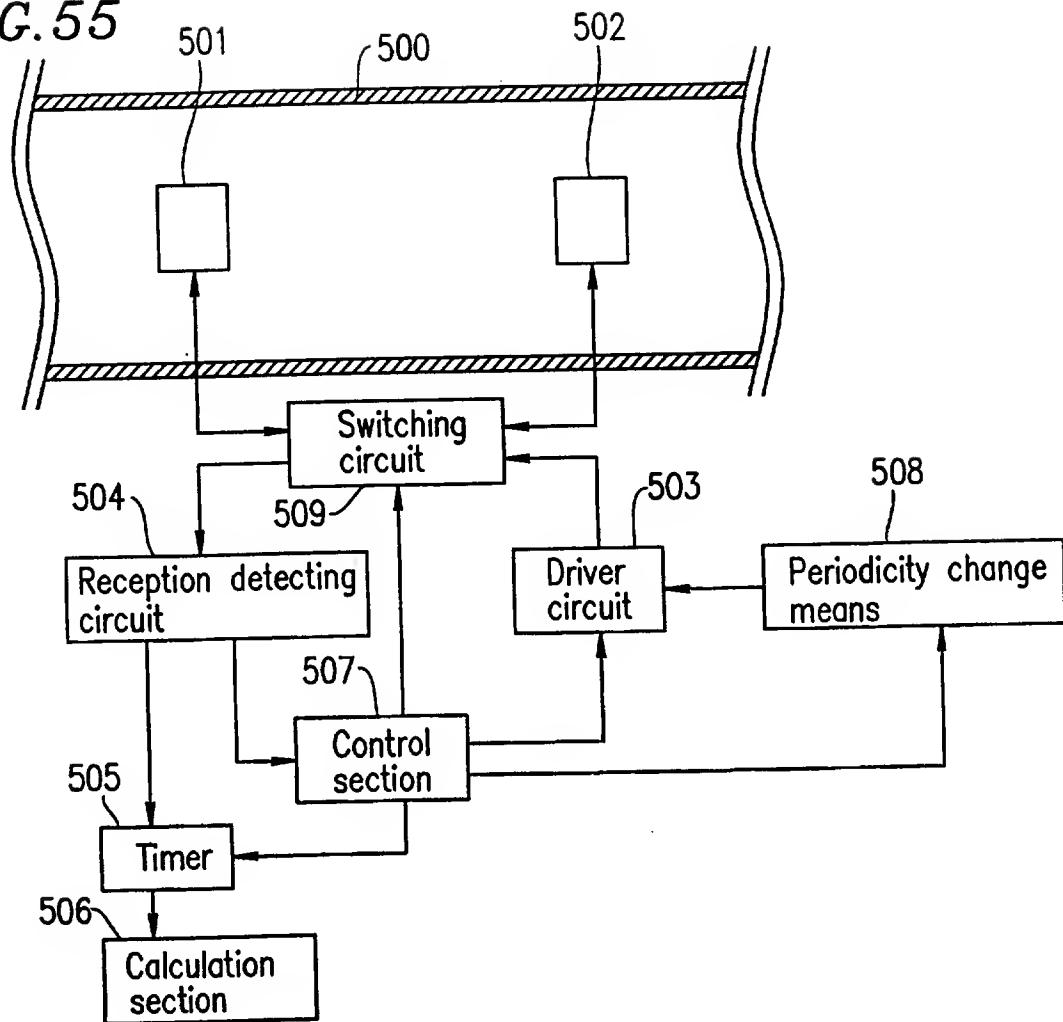


FIG.56

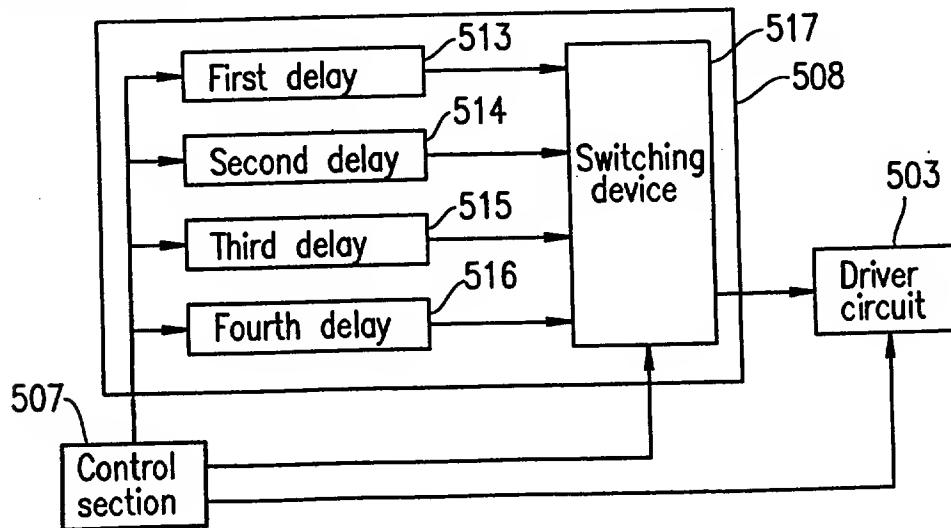


FIG.57A

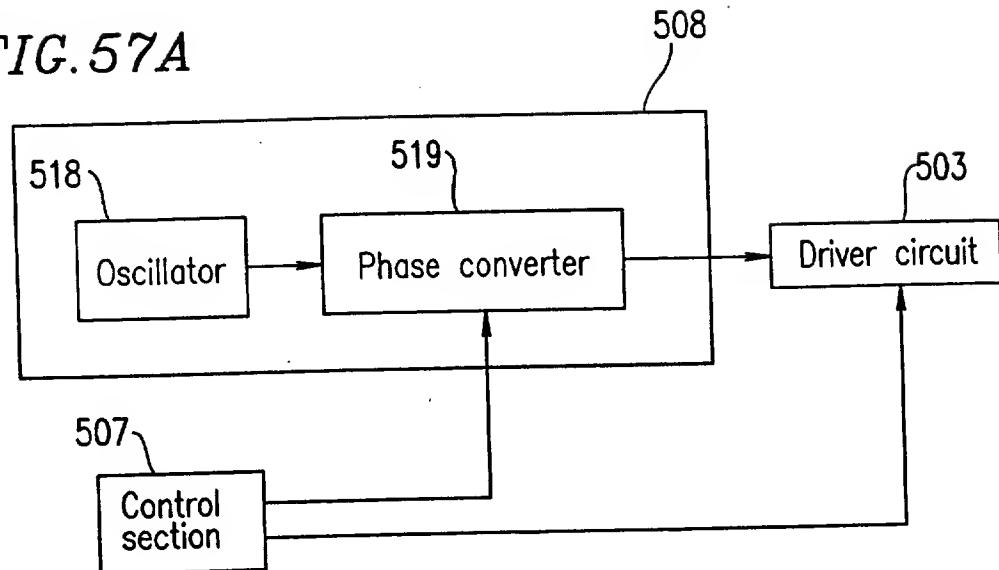


FIG.57B

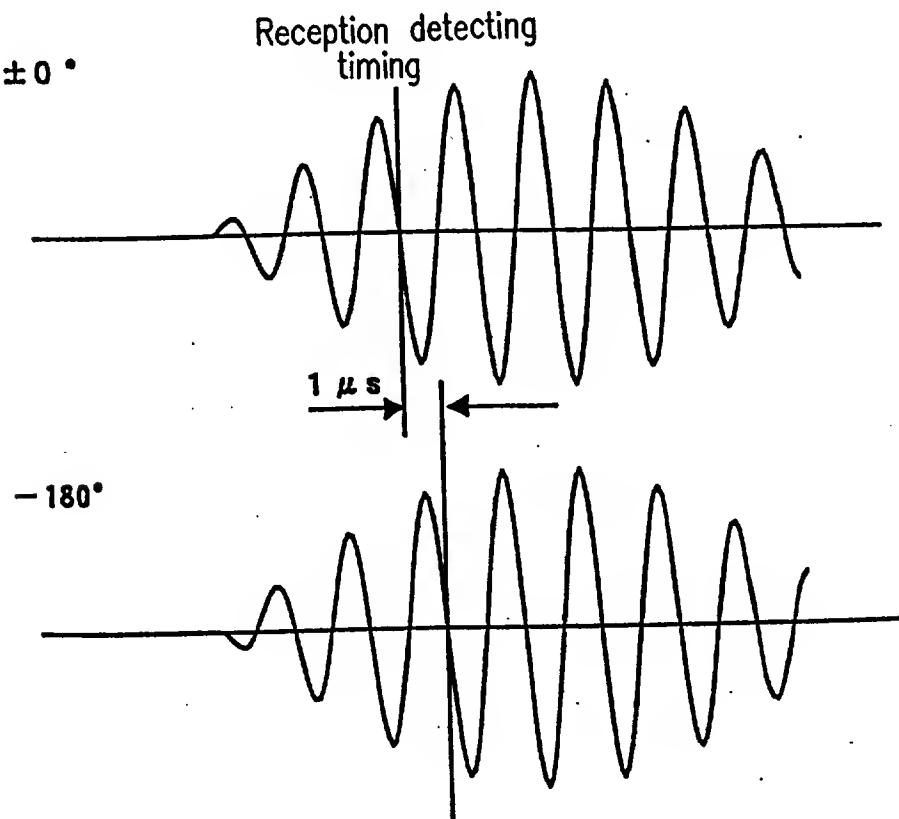


FIG.58

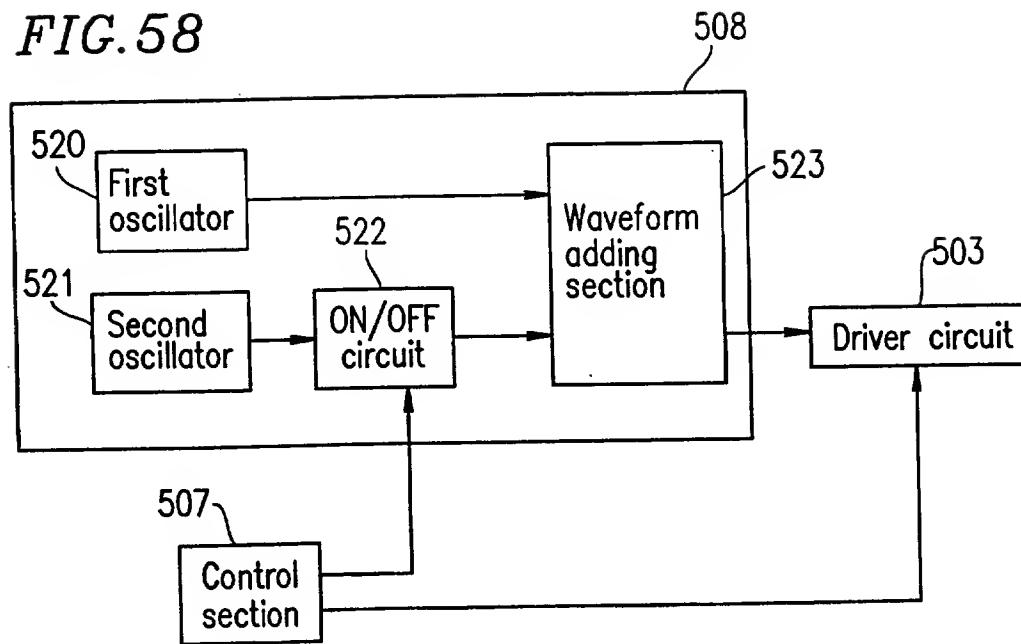


FIG.59

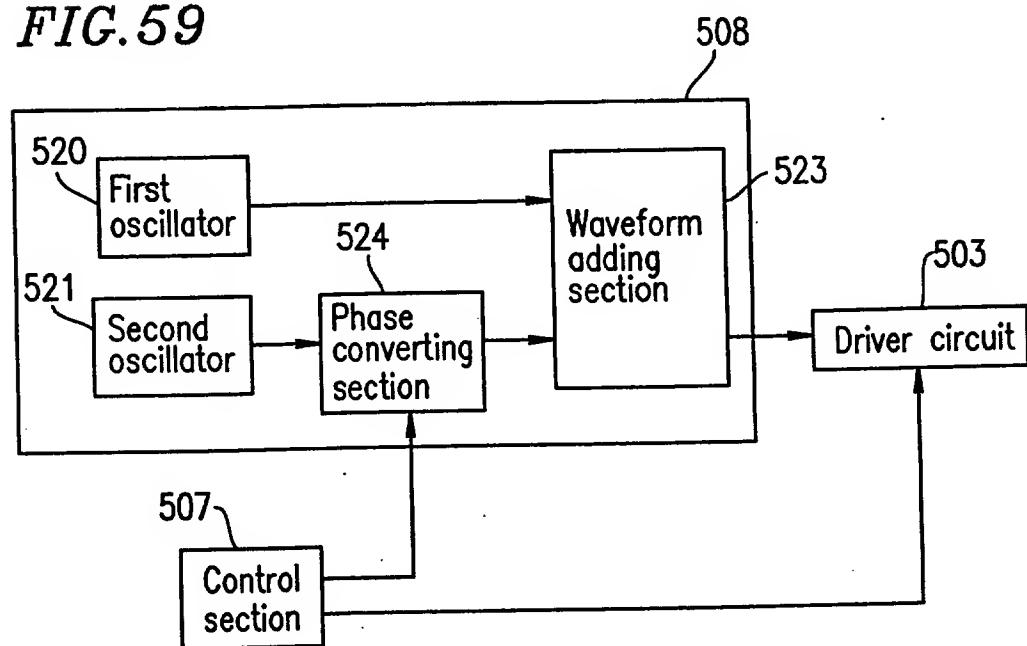


FIG. 60

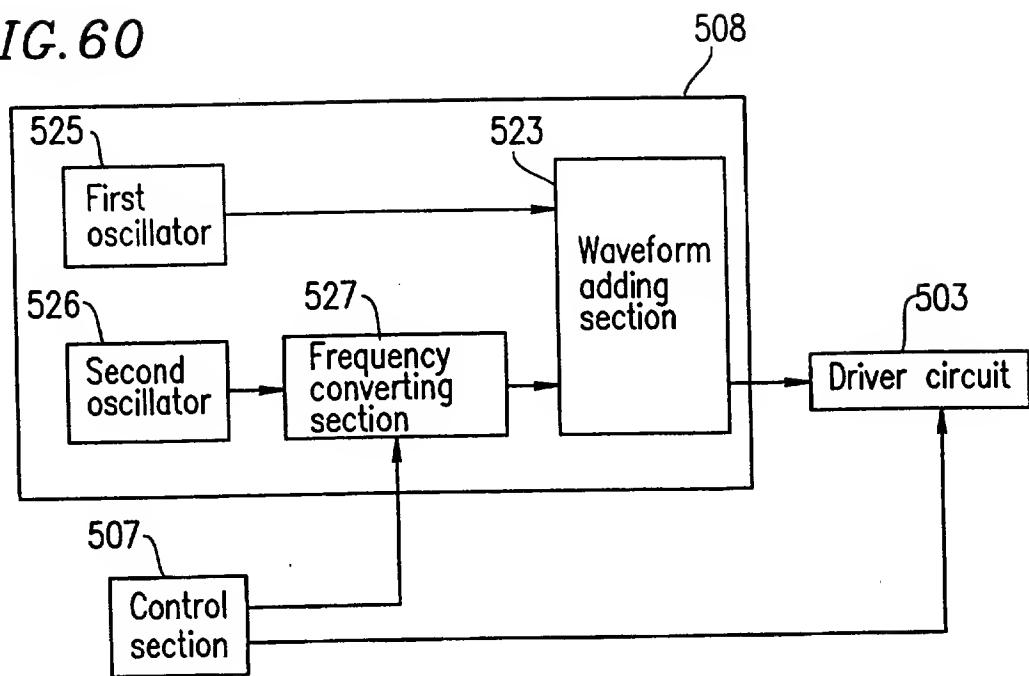
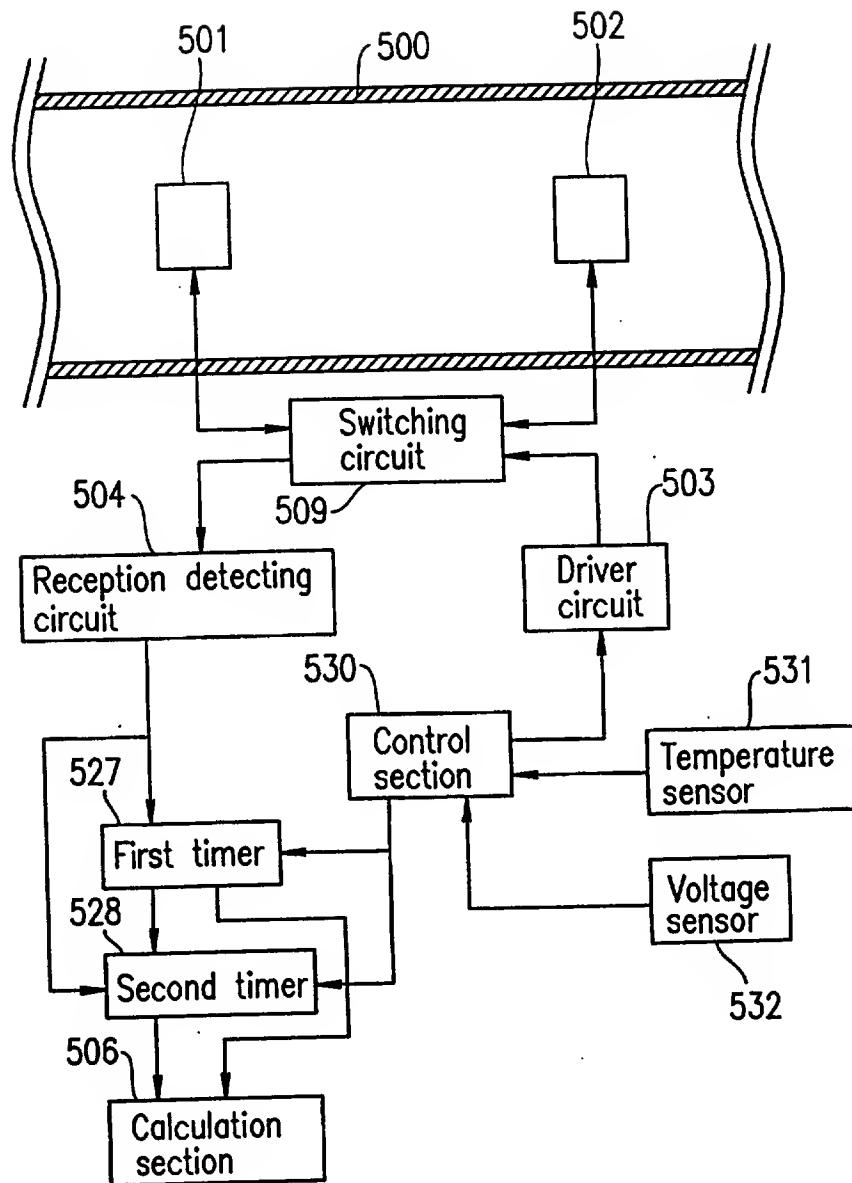


FIG. 61



527 First timer

528 Second timer

531 Temperature sensor

532 Voltage sensor

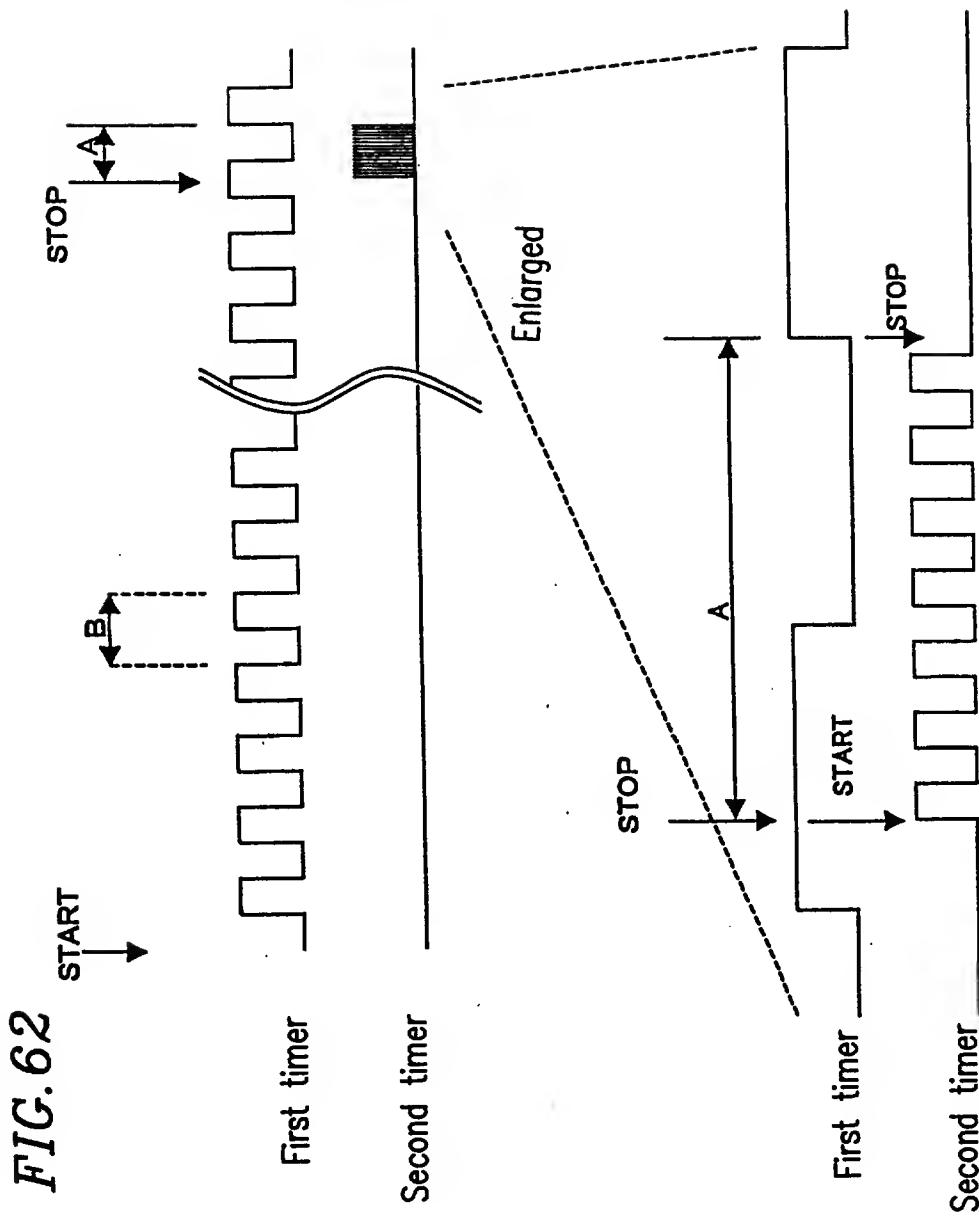
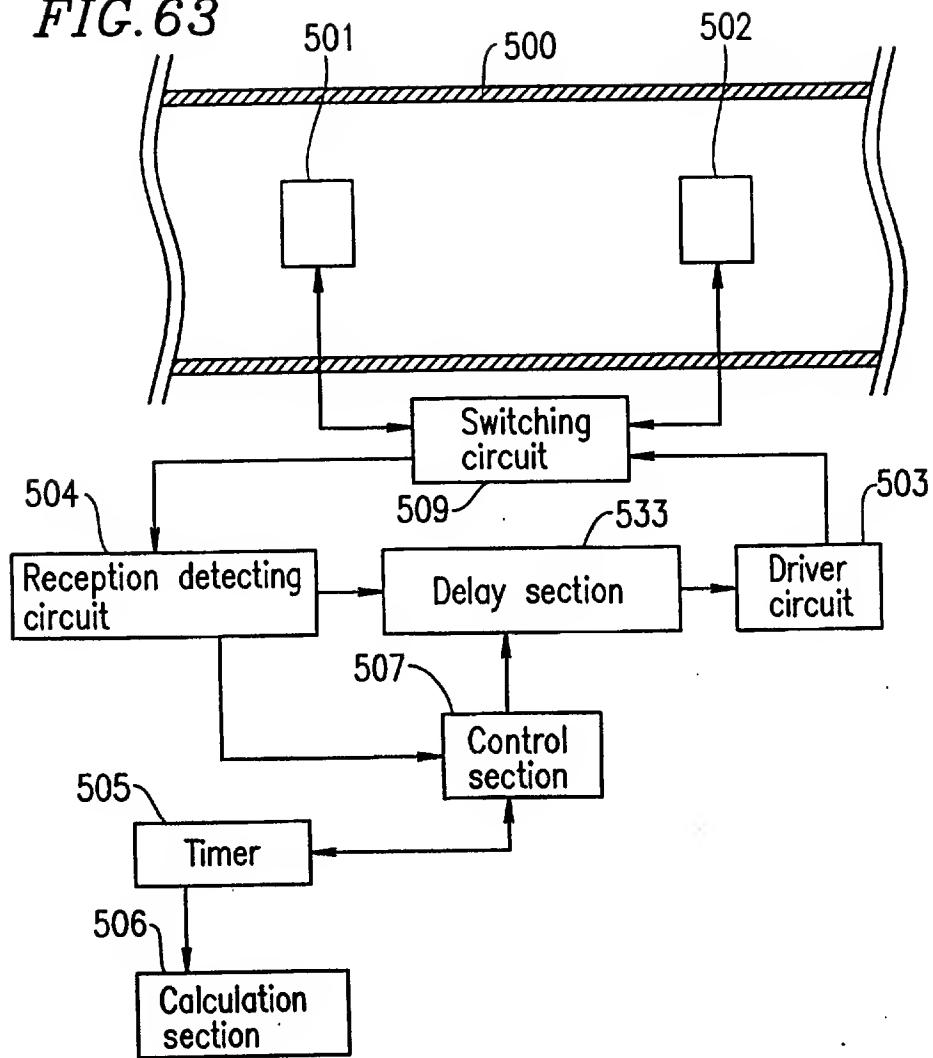
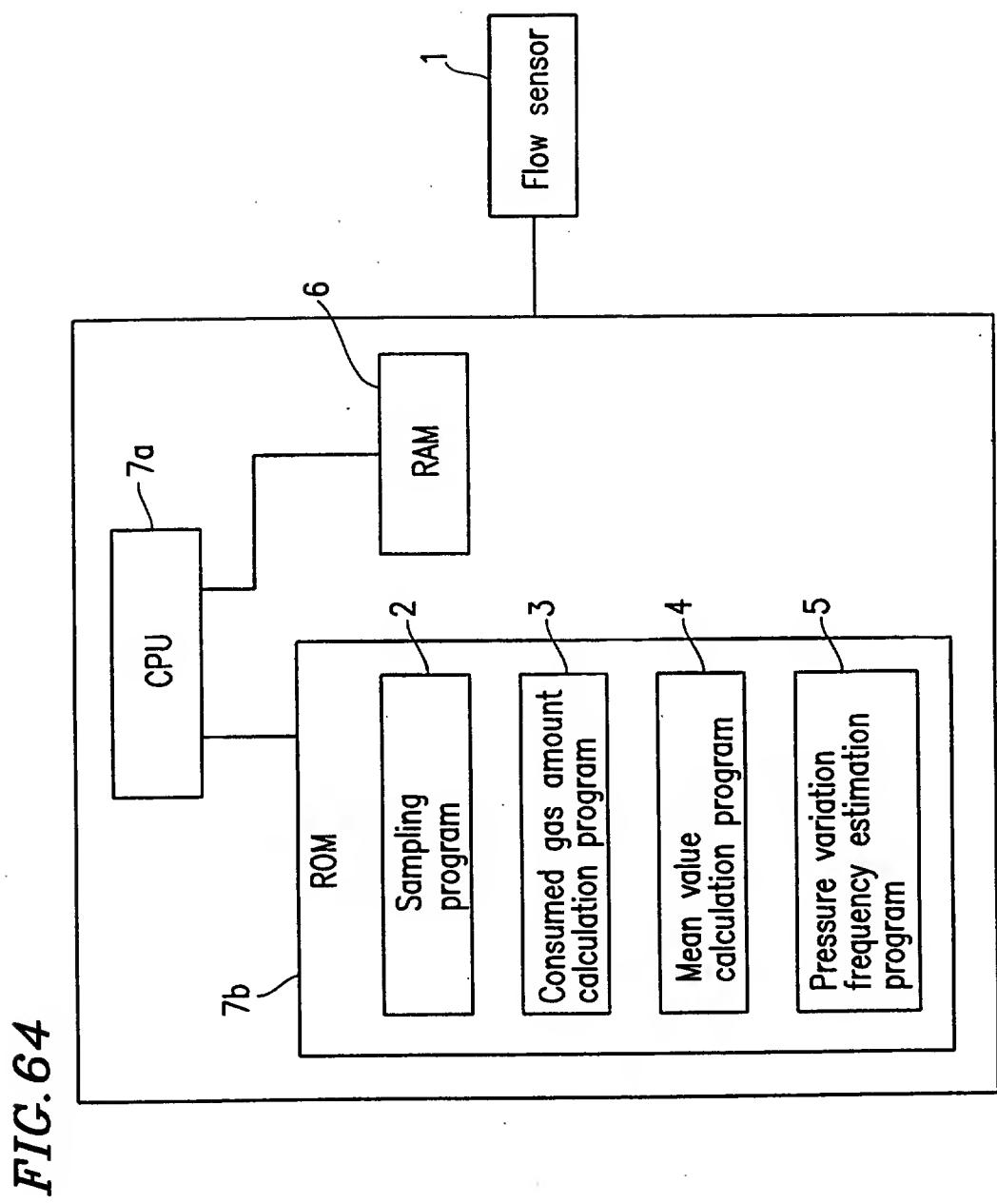
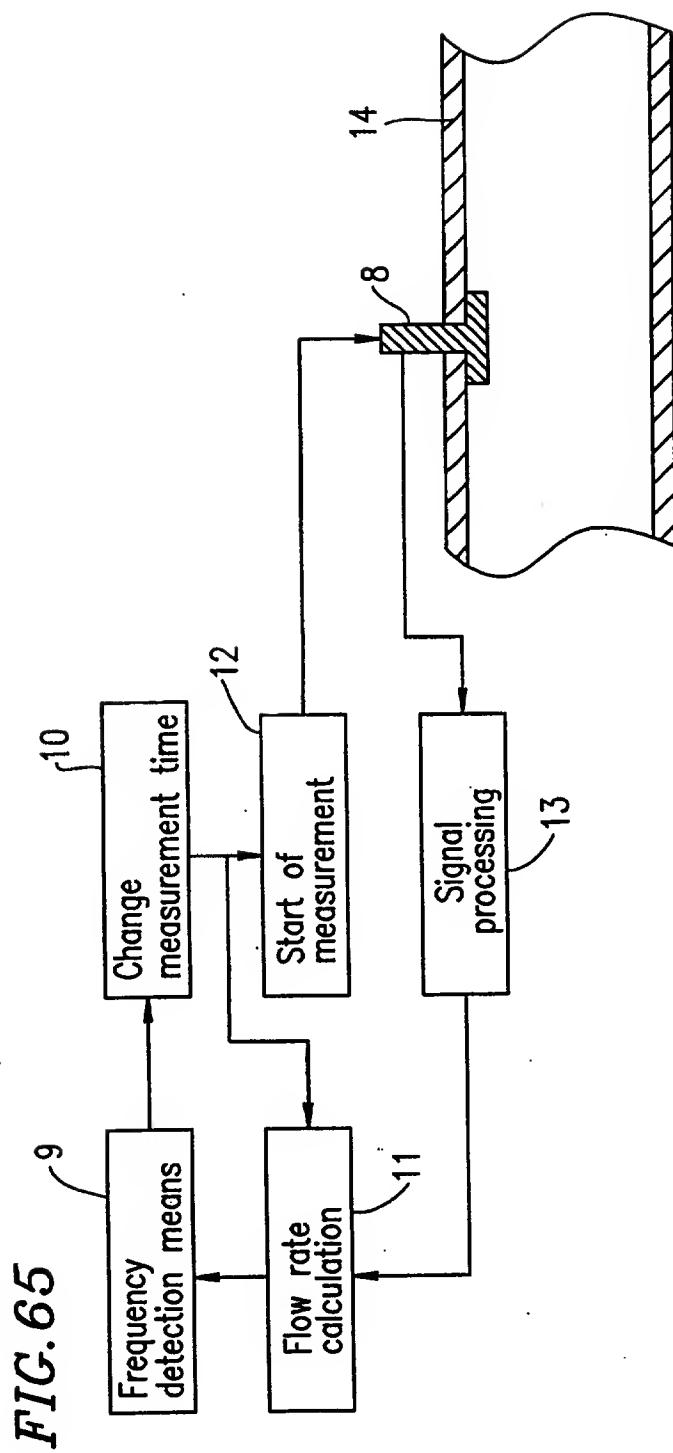


FIG. 63



533 Periodicity stabilization means Delay section





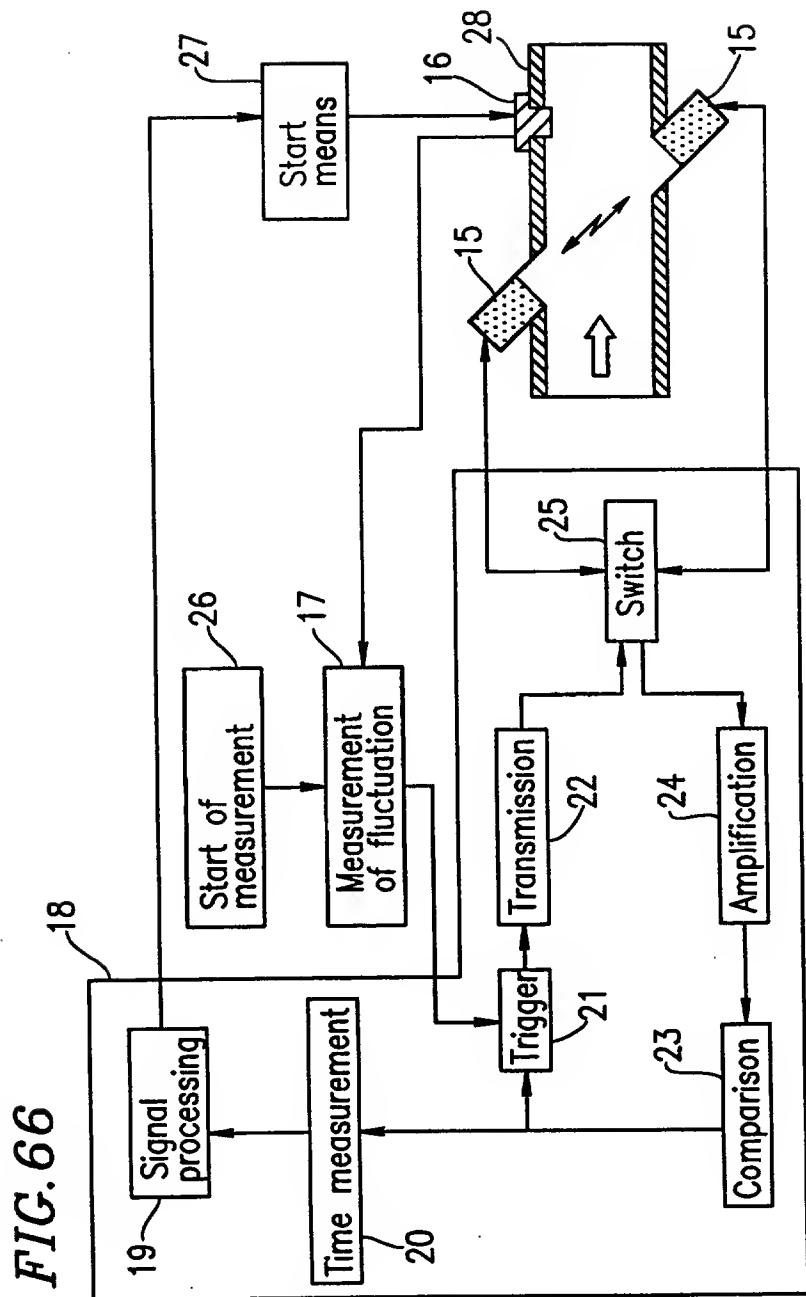


FIG. 67

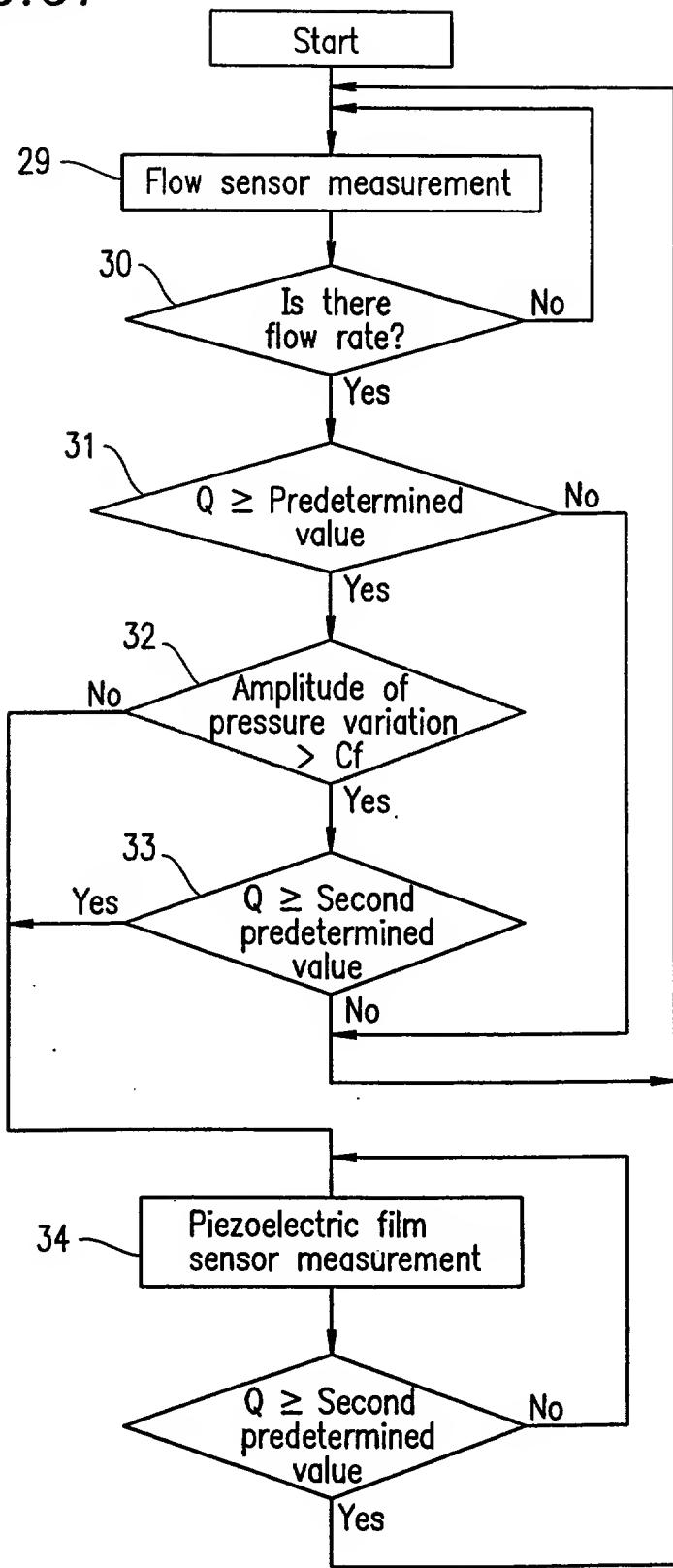


FIG. 68

